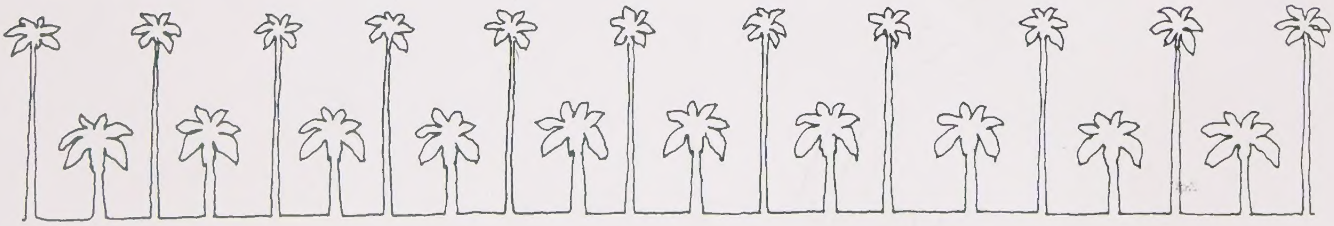
City of Santa Monica General Plan Land Use and Circulation Elements

Draft Environmental Impact Report



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Santa Monica General Plan
Land Use and Circulation Elements
Draft Environmental Impact Report
November 1983

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1.0 SUMMARY

1.1 PROPOSED ACTION

The proposed action is the Draft Land Use and Circulation Elements of the General Plan. The Draft Plans accommodate Santa Monica's land use forecast for the year 2000. For further information on the proposed project, please refer to Chapter 3.0.

1.2 SIGNIFICANT ADVERSE IMPACTS

The policies of the Draft Land Use and Circulation Elements mitigate all significant adverse impacts to insignificant or minor impacts. Minor and moderate impacts associated with growth are discussed in Chapter 6.0 under the headings of Traffic and Noise Impact. The project will result in numerous beneficial impacts; these are discussed also in Chapter 6.0.

1.3 ALTERNATIVES CONSIDERED

Two alternatives to the proposed project were considered. The first alternative was a continuation of growth under existing zoning, referred to herein as the Baseline Alternative, or Scenario 1. The second alternative was the implementation of the policies of the Commercial and Industrial Task Force Recommendations, also referred to as Resolution 6385 and Scenario 2. The comparison of these two alternatives with the proposed Draft Land Use and Circulation Elements is best explained in Table 25, in Chapter 7.0. This figure demonstrates that the proposed action results in more employment, less vehicular traffic, more open space, greater net revenue to the city, and a more enhanced visual environment than do the other alternatives considered.

2.0 INTRODUCTION

2.1 AUTHORIZATION

This report was prepared in accordance with the "California Environmental Quality Act" of 1970 (CEQA), as amended and in conformity with the "State Guidelines for Implementation of CEQA," promulgated on August 1, 1983.

2.2 PURPOSE

This report, as with all EIRs, is an informational document intended to provide data to decision makers with respect to the environmental consequences of the proposed action and all reasonable alternatives to it.

2.3 SCOPE

This report discusses environmental effects of the proposed revision to the Land Use and Circulation Elements of the Santa Monica General Plan. It addresses all issues identified in the "Initial Study" prepared by the city of Santa Monica on June 16, 1983, as well as those added by Planning Commission action on July 18.

In its "Recommendations for Focusing the EIR," the Planning Commission identified eighteen potential environmental effects of the proposed project (see Appendix A). Seven topics, including cumulative effects, were chosen for special attention:

- Population and Housing
- Land Use Changes
- Transportation
- Noise
- Government Services and Utility Systems
- Fiscal and Economic Effects

The Environmental Impact Report (EIR) for a general plan element differs from that which is prepared on an individual project, primarily in the level of specificity of the document. An EIR for a project can assess the possible <u>direct</u> effects while an EIR for a general plan element can assess only the possible <u>secondary</u> and <u>tertiary</u> effects of adopting the elements. For instance, the EIR for a new building project will describe the environmental consequences that might result from the traffic directly generated by the building project's employees, visitors, and shoppers. The EIR for a general plan element can only generally indicate the environmental consequences that might result from traffic generated by employees, visitors, and shoppers in new development that might occur if zoning and development standards based on the general use and intensity standards contained in the general plan were adopted.

The action of adopting a general plan element has no direct environmental impacts.

2.4 REFERENCE REPORTS

Draft Land Use and Circulation Elements, September, 1983

Draft Implementation Guidelines, September, 1983

Demographic and Economic Projections, 1980-2000, February, 1983

Planning and Environmental Analysis, Background to the Issue Papers, February, 1983

Circulation Analysis, February, 1983

Issue Papers (Downtown, Industrial Corridor, Neighborhood Commercial Areas, Highway Commercial Corridors, Oceanfront), March, 1983

City-wide Revenues and Expenditures, May, 1983

City-wide Land Use and Urban Design for Scenario 3, May, 1983

City-wide Circulation Analysis for Scenario 3, May, 1983

One of a Kind Planning Analysis Maps

- Existing Land Use 1982
- Projects Since 1975
- Proposed Projects
- Public and Quasi-Public Ownership
- Vacant Land
- Historic Landmarks
- Structural Condition
- Floor Area Ratio by Block
- Improvement/Land Value Ratio by Block
- Existing Building Heights
- Geological Hazards
- Sewer System
- Real Estate Market Demand vs. Development Potential by City Sector

2.5 PROJECT SPONSOR AND LOCATION OF REFERENCE REPORTS

City of Santa Monica Planning Commission
Attention: Program and Policy Development Division
Community and Economic Development Department
1685 Main Street
Santa Monica, California 90401
(213)393-9975 X266

3.0 DESCRIPTION OF THE PROJECT

3.1 PRINCIPAL OBJECTIVE

The principal objective of the proposed project is an update to the Land Use and Circulation Element of the General Plan in conformity with Government Code Section 65302. Contents required for the Land Use and Circulation Elements are discussed below.

Land Use Element -- The Land Use Element is a state-mandated component of the General Plan which designates the proposed general distribution, location, and extent of the uses of land for housing, business, industry, open space, recreation, etc. The Element contains statements on the standards for population density and building intensity for the various use districts.

The Element must be adopted by the City Council and embodies the city's land use goals and policies. It serves to guide future city decision making regarding the orderly development of the city.

Circulation Element -- The Circulation Element is a state-mandated component of the General Plan which indicates the general location and extent of existing and proposed streets, transportation routes, and local public utilities. The appropriate capacity and location of these circulation facilities is correlated with the location and intensity of land uses as set forth in the Land Use Element.

The Element must be adopted by the City Council and embodies the city's circulation goals and policies. It serves to guide future city decision making regarding the movement of people and goods around the city.

3.2 MAJOR PROPOSALS

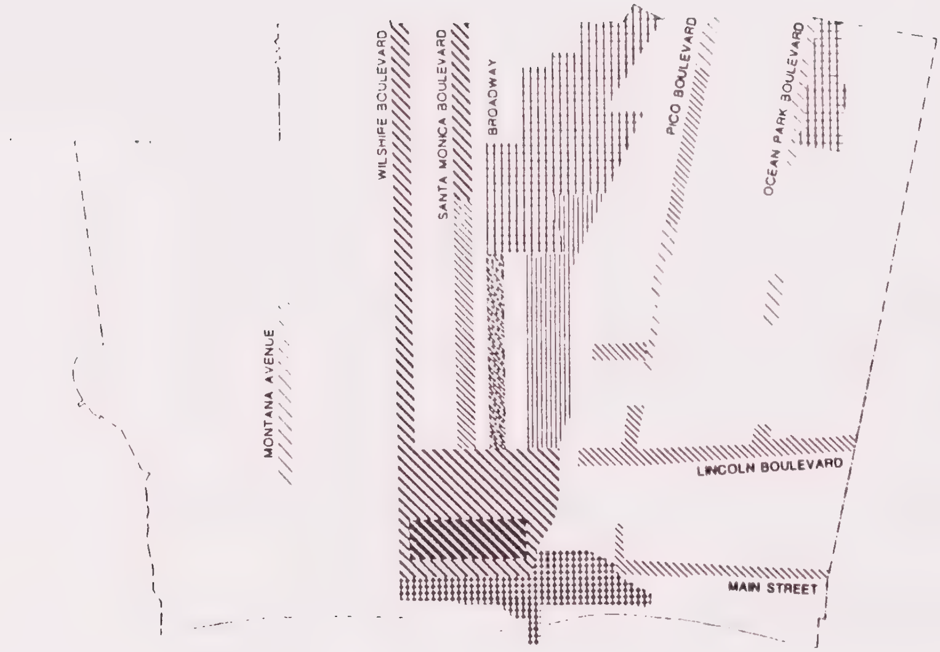
Major proposals of the Draft Land Use and Circulation Elements are discussed below and are illustrated in Figures 1-4.

Demographic Forecast -- Santa Monica had a population of 88,314 residents and 54,782 jobs in 1980. In the year 2000, under the proposed Land Use Element, it is estimated that the city will contain 92,889 residents and 84,424 jobs. In order to accommodate this growth and to meet city goals, the city will require 5,792,051 square feet of new office, retail and industrial space, 2,000 new residential units, and 2,450 new hotel rooms. From 1982 base year, this growth will represent a 38 percent increase in office, retail and industrial space, a 4 percent increase in housing units, and a 245 percent increase in hotel rooms.

Major Land Use Proposals -- Major land use proposals and relative commercial-industrial development intensity are diagrammed in Figures 1 and 2, and are briefly outlined below:

Figure 1:

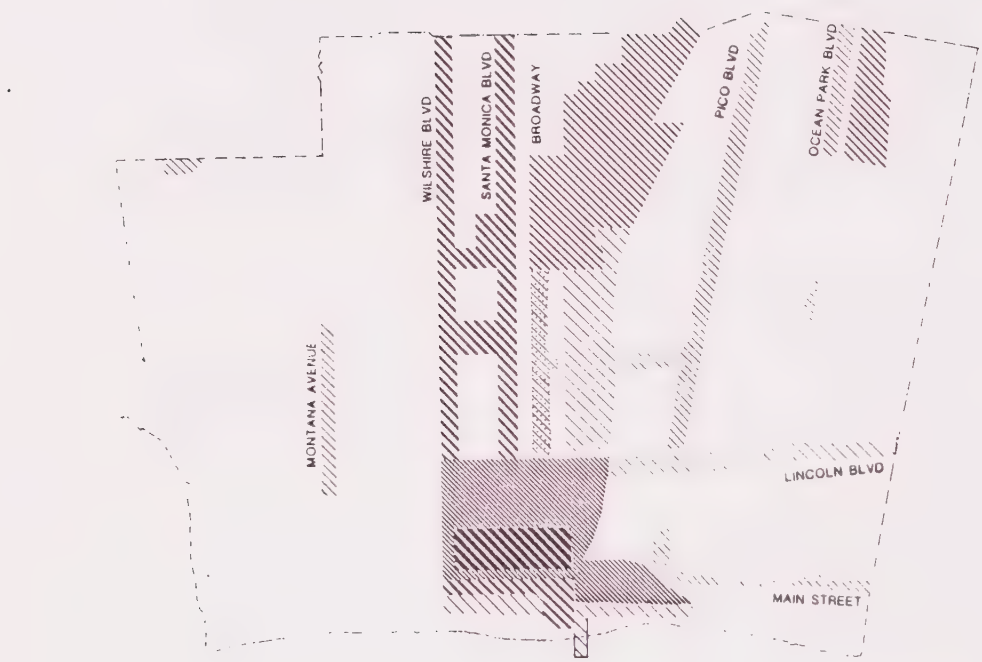
Major Land Use Proposals



- Retail Core
- General Commercial
- Oceanfront Uses
- Special Office
- Service & Specialty Commercial
- Neighborhood Commercial
- Industrial
- Residential Mixed Use

Figure 2:

Intensity of Commercial-Industrial Use



- Highest
- High
- High/Moderate
- Moderate
- Low
- Lowest
- Mixed Use District: Low-Intensity Commercial with Housing

- Direct the majority of future office and retail growth to the Downtown, the Special Office District, and Wilshire Boulevard. Allocate uses and intensity to reinforce the distinctive roles of these three districts, i.e., (1) concentrate comparison retail and cultural uses in the Downtown, to reinforce it as the focus of the city, (2) locate large-scale office and advanced technology uses in the Special Office District, and (3) locate commercial uses that cannot be accommodated in the Downtown in the Wilshire/Santa Monica Corridor.

- Create a new visitor-serving concentration in the Oceanfront area, improve the Civic Auditorium by increasing its conference facilities, enhance the Promenade and Pier, extend Palisades Park to Crescent Bay Park, and retain the existing residential mix, in order to capture the potential of this opportunity area as both a revenue generator and an amenity for Santa Monica city residents.

- Retain and enhance existing concentrations of neighborhood commercial areas to serve all residential districts.

- Conserve the city's industrial and manufacturing sector, especially valuable "incubator" uses in the western Olympic Corridor.

- Revitalize Broadway between Downtown and 20th Street as a primarily residential street to unite the surrounding residential neighborhood.

- Preserve and enhance a favorable environment for residential neighborhoods. Protect housing from all forms of incursion caused by commercial/industrial uses and traffic.

<u>Major Urban Design Proposals</u> -- A necessary complement to the land use provisions of the Plan is a vision of the desired <u>form</u> and <u>character</u> of future development in the city, i.e, its "urban design." Major proposals in this regard are diagrammed in Figure 3.

There are essentially three elements in the urban design strategy:

First, the plan attempts to <u>make the city more "imageable" and its individual elements more recognizable.</u> There are a number of key plan proposals toward this enhancement of the city's distinctive <u>character</u> and <u>focus</u>:

- Create a recognizable "signature" for major streets, by the use of characteristic streetscape treatment composed of landscape, lighting, graphics, and street furniture. Santa Monica has already established this tradition, with palms along Santa Monica Boulevard and Ocean Avenue, coral trees along Olympic

Figure 3:

Major Urban Design Proposals

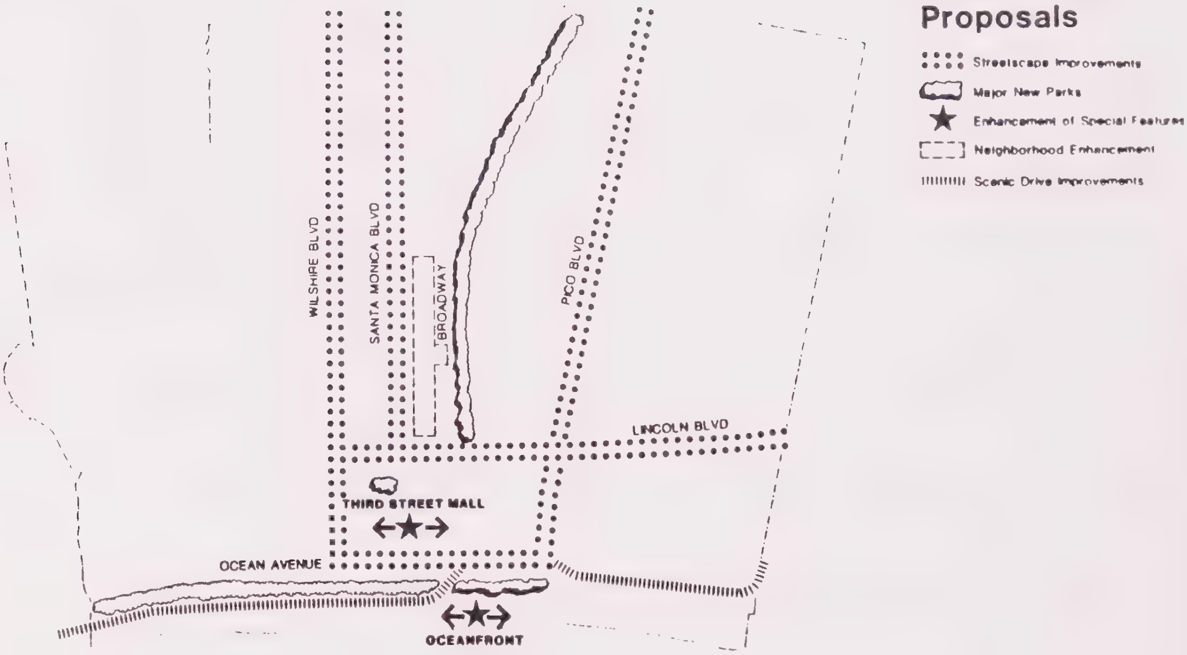
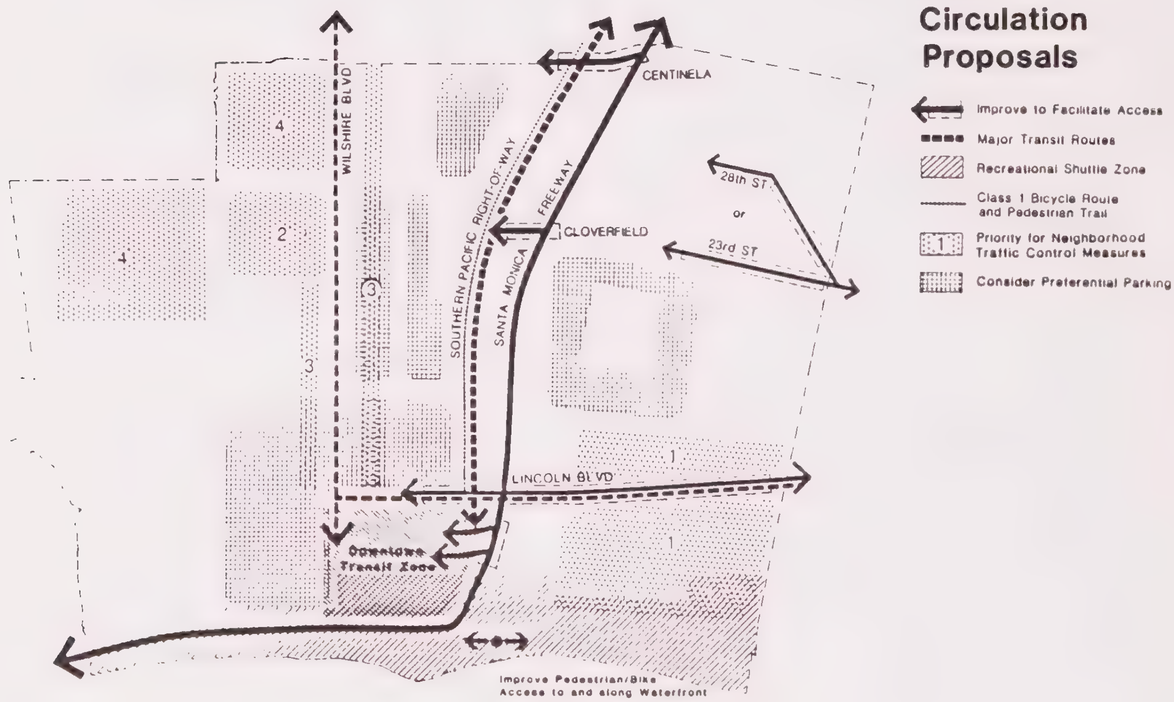


Figure 4:

Major Circulation Proposals



Boulevard, shade trees in the residential neighborhoods, etc. The tradition should be extended and reinforced; priority streets are those framing Downtown (Ocean, Wilshire, and Colorado) and major entrances to the city (Lincoln, Santa Monica Boulevard, Pico Boulevard, etc.).

o Increase the supply and extend the network of public and private open space, especially in the Olympic Corridor area, the eastern portion of Downtown, and the Oceanfront.

Secondly, the plan attempts to encourage compatibility with context. The following proposals illustrate this principle of harmonious interrelationship:

o All development in the city should reinforce its existing traditional architectural image as a low-scale, light-colored "beach community."

o Conserve notable historic buildings. Require new development to respect the character of nearby or adjacent historic resources.

o There should be a sensitive transition between commercial and residential uses, created by means of appropriate height, bulk, and screening guidelines.

Thirdly, the plan attempts to improve the street-level environment, especially for pedestrians. Examples of plan proposals toward this aim include:

o Recommendation of solar guidelines to preserve sunlight on sidewalks and public open space, especially during the winter.

o Control on ground floor use (e.g., require a majority of street frontage to be neighborhood commercial in certain areas, and "active uses" in others).

o Maintenance of an attractive, active, and continuous street facade, by such means as required "build to line" at the street frontage, except in the Special Office District; limitation of curb cuts; screening parking and service entrances; and encouraging streetscape improvements.

o Encouragement of pedestrian amenities, such as frequent entrances and display windows, outdoor cafes and sidewalk retailing, awnings, and signage, usable plazas or parks, and public art, oriented to walking traffic.

o Encouragement of "human-scale" design, by means of articulation of such features as cornices, columns, and entrances.

Major Circulation Proposals -- The Draft Land Use Plan has directed the majority of future growth to the Downtown, Special Office District, Oceanfront, and Wilshire Boulevard. In order to accommodate this growth, as well as alleviate existing circulation problems, the Draft Circulation Plan recommends a number of major proposals as diagrammed in Figure 4 and described below.

Transportation Systems Management --

- Increase average auto occupancy by 16 percent, from 1.2 persons per car to 1.4 persons per car in the year 2000, by preferential treatment to ridesharers.

- Encourage staggered work hours to reduce peak hour traffic.

Freeway/Highway --

- Improve freeway access at the eastern boundary of the city by either increasing the capacity of the Cloverfield Interchange or adding ramps to the 20th Street Interchange and/or improving the Centinela Interchange.

- Add eastbound on-ramp to 4th Street Interchange.

Arterial Streets --

- Improve capacity of Lincoln Boulevard south of the freeway by prohibiting peak hour on-street parking, restricting turn movement by installing medians, and prohibiting additional curb cuts.

- Improve alignment of Centinela north of the freeway to facilitate freeway access.

- Upgrade the capacity of 23rd Street south of Ocean Park or, alternatively, extend 28th Street along south boundary of airport to 23rd Street, to facilitate north-south access to the city.

Local Streets --

- Implement neighborhood traffic control plans to discourage through traffic in residential neighborhoods. Priority for implementation is indicated numerically in Figure 22.

Parking --

- Modify off-street parking standards to require all new development to accommodate parking on site.

- Consider implementing preferential parking districts in areas with current parking problems.
- Relocate parking fronting on the Promenade and on the Beach in concert with new hotel development and the recreation transit shuttle.
- Encourage shared use of parking facilities to accommodate the needs of visitors during weekends and holidays.
- Reduce on-site parking requirements in conjunction with a Transportation System Management Plan.
- Prohibit all on-street parking in front of new development on Lincoln.
- Encourage parking and service access from alleys.

Transit --

- Double transit ridership to nine percent of total trips, from 4.5 percent.
- Give highest priority for the implementation of a light rail mass transit route on the Southern Pacific Railroad right-of-way.
- Identify Wilshire Boulevard as a transit preferential street and potential future mass transit corridor.
- Implement a transit shuttle linking the Beach, Main Street, Downtown, and Oceanfront to peripheral parking structures.
- Consider implementing a transit shuttle between major employment centers, regional transit routes, and remote parking lots.

Bicycle and Pedestrian --

- Create a new separate pedestrian trail and bicycle route on the Southern Pacific Railroad right-of-way between Downtown and the eastern city limits.
- Plan a new separate bicycle route and pedestrian trail between the Civic Center and the Promenade.
- Improve the pedestrian environment in all commercial districts.
- Encourage accessibility for the disabled.

4.0 REGIONAL AND PLANNING CONTEXT

4.1 REGIONAL CONTEXT

Santa Monica is located in the Los Angeles region, now the second largest population concentration and economic center in the country, ranking only behind New York. Projections indicate that it will remain one of the fastest growing of the large urban regions in the United States. Santa Monica is 15 miles west of downtown Los Angeles. Nearby growth concentrations are the Century City area and Wilshire Corridor, with secondary nodes at the Los Angeles International Airport, Marina Del Rey, Westwood, and Beverly Hills, among others (see Figure 5). Santa Monica is surrounded on three sides by the Los Angeles districts of Venice, Mar Vista, West Los Angeles, Brentwood, and Pacific Palisades (see Figure 6).

4.2 RELATIONSHIP TO LOCAL AND REGIONAL PLANS

The Southern California Association of Governments (SCAG) is responsible for land use and transportation planning efforts in the Los Angeles region including Santa Monica. The proposed plan is based on accommodating growth forecasts which are generally consistent with SCAG population and employment estimates (see Section 6.4). Because these SCAG estimates are the basis for most further regional planning, the proposed Land Use and Circulation Elements are consistent with the Regional Transportation Plan (RTP), the Regional Water Quality and Air Quality Control Plans, and the plans for regional sewage treatment. The utility companies and the Metropolitan Water District perform independent forecasting; however, the projections of these agencies are similar to those prepared by SCAG.

The goals and objectives of the Land Use and Circulation Elements are consistent with, or -- in the case of anticipated transit ridership -- more ambitious than, those contained in the RTP. The specific improvements recommended in the Circulation Element are also consistent with the RTP. Two potential rail transit corridors are proposed as Status C (projects needing more study) in the RTP and are also included in the Circulation Plan as potential mass transit corridors. Downtown Santa Monica is recommended as a potential location for a future intermodal transportation center in both documents. The Circulation Plan recommends measures to encourage ridesharing and promote preferential parking programs, as suggested in the RTP. The roadway improvements included in the Circulation Plan are consistent with the goal of the RTP to support highway projects which are based on and promote SCAG-adopted growth policies.

Figure 5: Regional Context

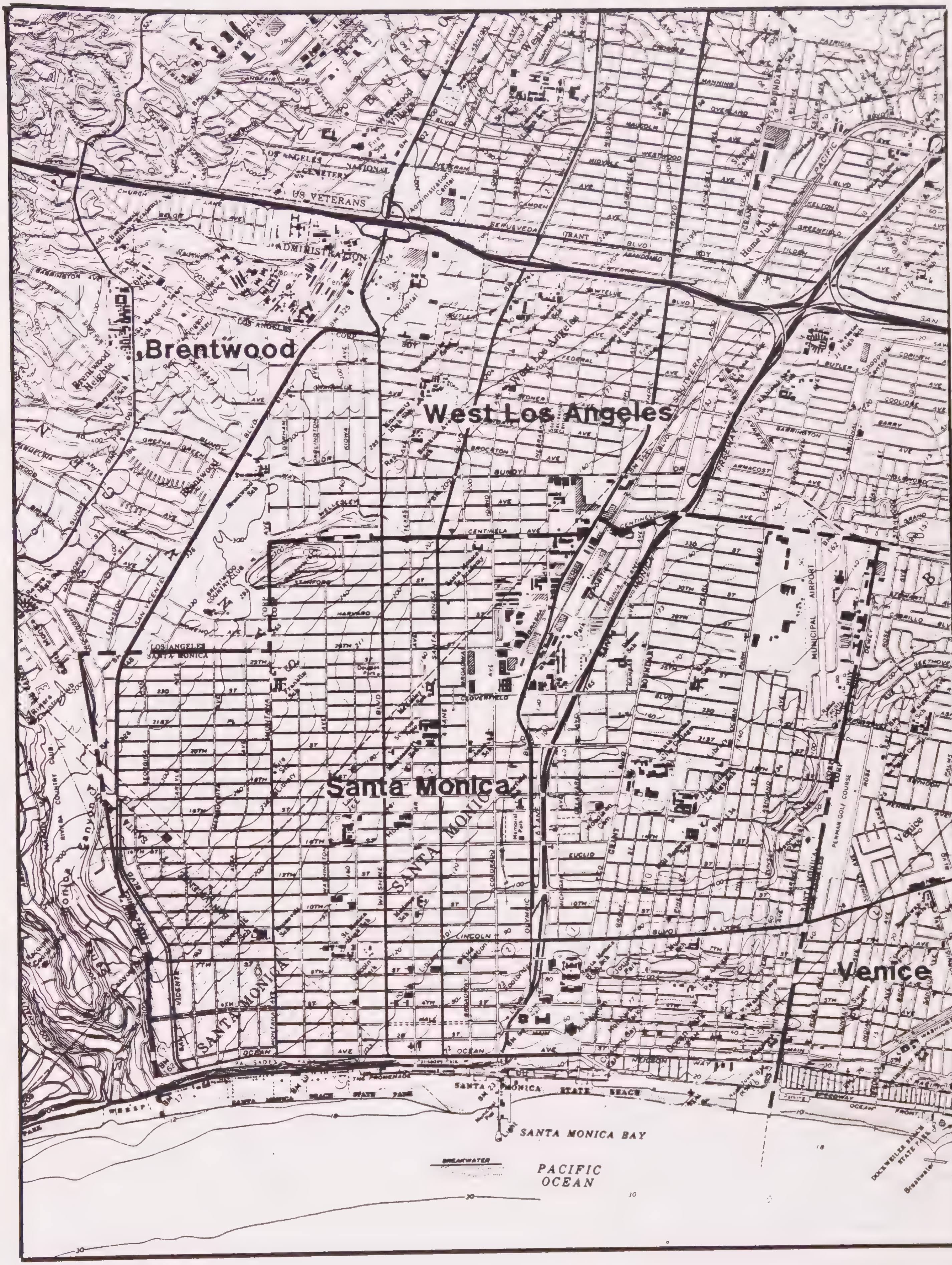


Figure 6: Site Location

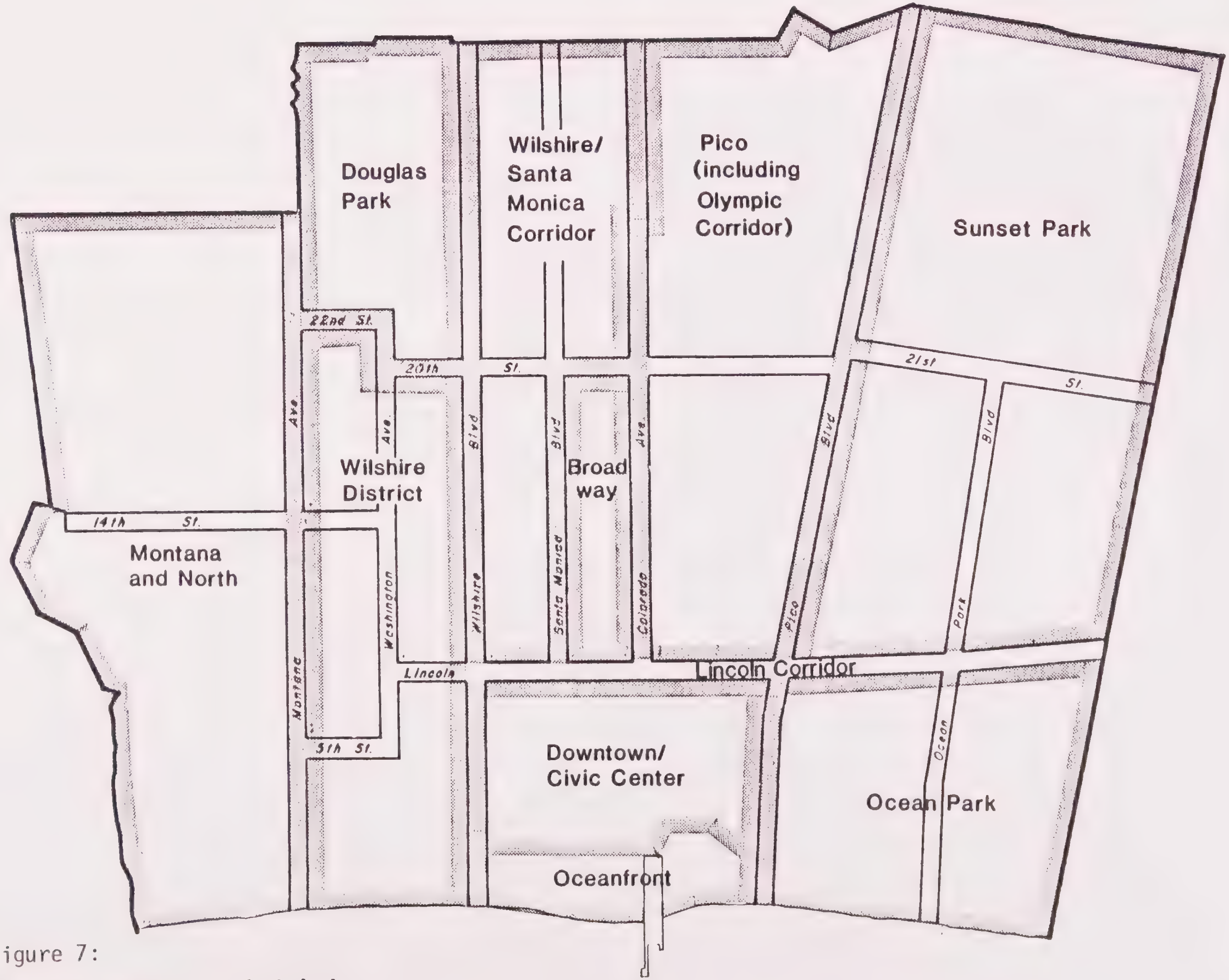


Figure 7:

Neighborhood / District Boundaries

Plans for these communities and for other relevant local agencies have been considered in the process of preparing this draft update to the Land Use and Circulation Elements.

4.3 CITY GENERAL PLAN ELEMENTS AND CONSISTENCY STATEMENT

State law requires consistency among all the elements of the General Plan. The following is a list of the existing Elements and their date of adoption.

Land Use - 1957
Circulation - 1957
Housing - 1983
Conservation - 1975
Open Space - 1973
Seismic Safety - 1976
Public Safety - 1975
Noise - 1975
Scenic Corridors - 1974

The proposed Draft Plan replaces the 1957 Land Use and Circulation Elements, and is consistent with the remaining Elements of the General Plan. If at any time in the future, inconsistencies are discovered, the other Elements should be revised to conform to the adopted Land Use and Circulation Elements.

5.0 EXISTING ENVIRONMENTAL SETTING

5.1 CLIMATE

Meteorology -- Santa Monica's climate can be characterized as mild, tempered by cool sea breezes. This usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana Winds. Temperatures average annually between 54 to 69 degrees Fahrenheit. Rainfall averages 14 inches annually. Average annual humidity is 70 percent. Because of persistent low inversions and cool coastal ocean water, morning fog and low stratus are common. Santa Monica has approximately 140 clear days per year. Average wind speed is 7.7 miles per hour.

Human comfort -- Human comfort is sensitive to the climatic factors of temperature, humidity, wind, sunlight, clothing, activity, and time of day. Slab-like buildings with the wide dimension oriented in the windward direction can cause wind acceleration of 2 to 3 times existing wind. Wind in excess of 10 miles an hour causes light objects to take flight. The presence of sunlight, or, conversely, the lack of shading, is a major factor in perceived human comfort for pedestrian activity in the winter. Figure 8 diagrams the shading effect on sidewalks of a typical Santa Monica block orientation, at different building heights, at 12 noon on the winter solstice, the lowest sun angle of the year. (The winter solstice, December 21, is chosen because it is the coldest time of the year, i.e., when availability of sunlight is most important to pedestrians. The noon hour is chosen as the criterion because that is the time when the maximum number of people are out on the street.)

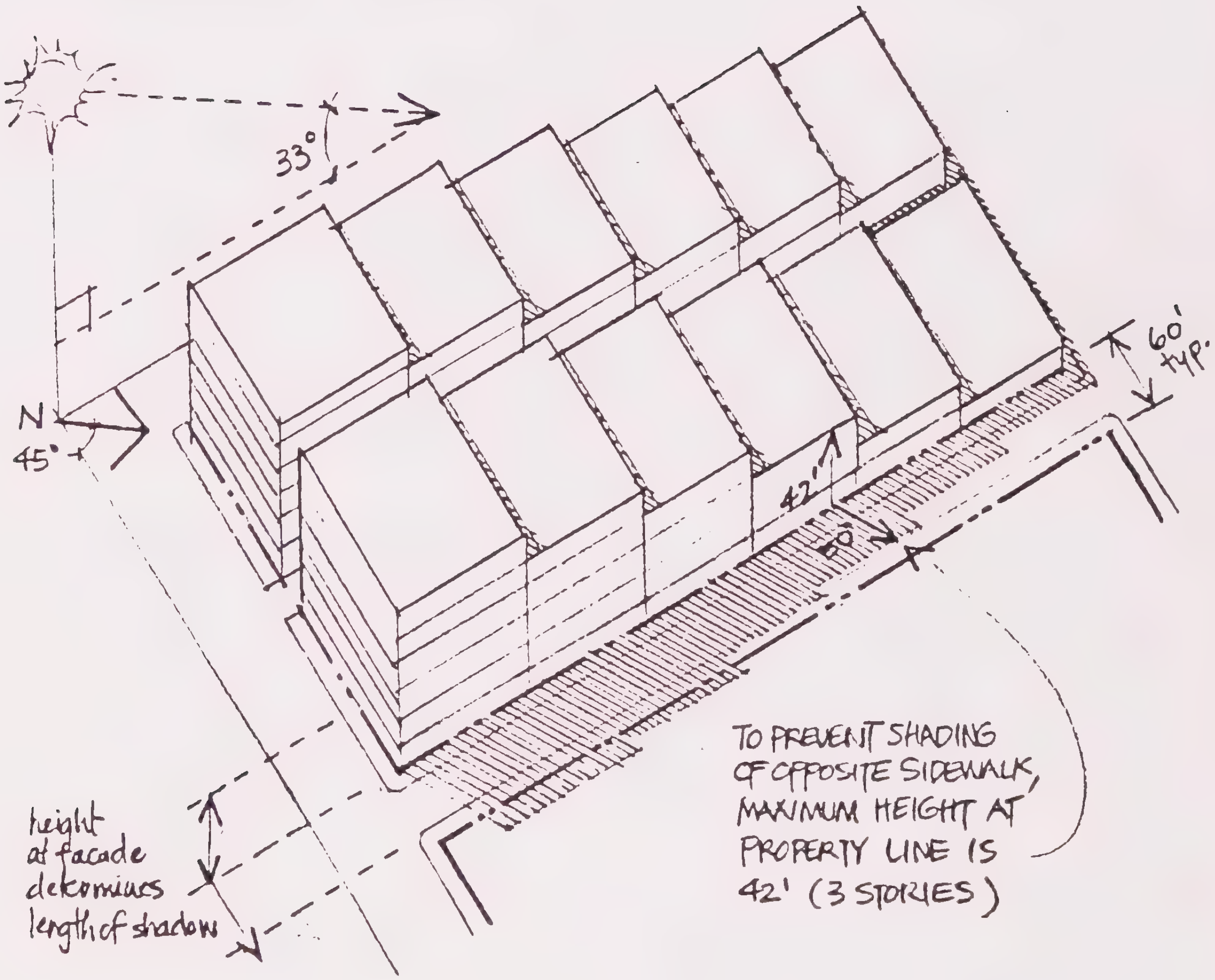
As illustrated, each ten feet of added height at the property line throws approximately an extra twelve feet of shadow on the street. Therefore, if one wishes to preserve sunshine on the opposite sidewalk, the maximum height at the property line should be approximately 42 feet, or about three stories.

5.2 GEOLOGY AND STRUCTURAL CONDITIONS

Geology -- The city of Santa Monica lies at the foot of the Santa Monica Mountains on a gently south-sloping alluvial plain. The local geology is dominated by Pleistocene-age sedimentary deposits typical of most of the Los Angeles coastal plan. An isolated exposure of older Pliocene-age Pico Formation occurs at the northeasterly corner of the city, adjacent to the Brentwood Country Club.

Figure 8:

SHADING ANALYSIS



General Rule: For every 10' height at facade, 12' of added shadow cast.

Source: Hall Goodhue Haisley and Barker

The coastline within the city is characterized by a steep sea cliff along the northern two-thirds of its extent. The sea cliff has been subject to numerous slumps and rockfalls in the past, but has performed surprisingly well, probably because of the semi-arid Southern California climate.

Seismicity -- Santa Monica is located in a seismically active region, like much of California. The Seismic Safety Element of the General Plan includes tentative location of two branches of the Malibu Coast-Santa Monica Fault within city boundaries. A Hazard Management Overlay District is recommended, to restrict the uses permitted in areas of suspected geologic hazard. The fault trace zone would extend not more than 660 feet on either side of the trace.

Recent trenching investigations on file in the Building Safety Department indicate that the fault trend lines lie very deep; hence, the chances of surface displacement are minimal.

Tsunami -- Tsunami is a seismically caused tidal wave. Data from the California Department of Mines and Geology indicate that maximum runup could reach thirty feet above Mean Lower Low Water (refer to one-of-a-kind Geologic Hazards map for areas affected). The Seismic Safety Element does not limit the land uses allowable in the runup zone; however, it does recommend that the areas should be evacuated during a tsunami alert if the arrival is coincident with a flood tide.

Unreinforced Masonry Buildings -- Immediate action is recommended by the Seismic Safety Element concerning unreinforced masonry buildings constructed prior to 1933, especially those used for public assembly. Some 250 unreinforced masonry structures were inspected by city inspectors. The Seismic Safety Element states that these buildings represent a hazard to the general public, but that any major upgrading or reconstruction will place a heavy economic burden on the owners (". . . the cost of structural improvements required to make such buildings conform to current seismic standards may necessitate an investment which is greater than the value of the building warrants").

Since the Seismic Safety Element was adopted, the city has surveyed all pre-1933 buildings to determine their structural integrity and has adopted a seismic safety ordinance. This ordinance requires all pre-1915 buildings to have floors and roof anchored to walls by 1985, and the city has recorded on the deeds of all pre-1933 buildings that do not meet current seismic code that a potential hazard exists in the event of an earthquake. This action has resulted in the rehabilitation of 40 buildings to date. Owners have an incentive to upgrade their potentially hazardous buildings before they sell, since lenders will not advance loans for substandard or hazardous buildings.

5.3 ARCHAEOLOGY AND HISTORY

There is one known potential archaeological site in Santa Monica, located on a vacant lot in the Ocean Park District.

The city's Landmarks Commission has designated 15 historic landmarks. All of these are west of 10th Street, the oldest section of Santa Monica. Two landmarks are on the national register.

5.4 POPULATION AND EMPLOYMENT

Existing setting is discussed together with Impacts and Mitigation in Chapter 6.4.

5.5 LAND USE

Development Trends -- Table 1 provides a 1982 estimate of the amount of commercial, residential, and hotel development in Santa Monica. The remainder of this section will outline key findings concerning development trends in the period 1975 to 1982. These trends are an excellent indicator of the location and type of future land use if the past is any prologue for the future, which it typically is.

Office -- The most dramatic trend from 1975 to 1982 was the increase in office space. During this period, 2,644,065 square feet were built, with an additional 1,439,000 square feet either under construction or with a development agreement. This total addition of 4.08 million square feet in seven years is more than the entire amount of office space existing before 1975.

Areas particularly experiencing pressure for new office growth are illustrated by Figure 9, "Land Use Growth 1975-1982 by Area." Depending on whether or not the Santa Monica Business Park area is included, the following percentages of past demand by area are estimated. The Business Park is anomalous, because it is not envisioned that a project of its magnitude will be constructed in a nearby location in the next 20 years, particularly because of lack of available vacant land.

Santa Monica Business Park	34.3%	Not included
Industrial Corridor	28.3	43.0%
Downtown	17.0	26.0
Wilshire/SM Corridor	14.7	22.0
Broadway	1.8	3.0
Lincoln	1.5	2.5
Pico	1.5	2.5
Other	.9	1.0
Total	100.0%	100.0%

Table 1
ESTIMATE OF SANTA MONICA DEVELOPMENT 1982 (in square feet unless otherwise noted)

District	Existing Dwelling Units	Retail	Office	Industrial	First Class Hotel Rooms
Downtown ***	1,231	1,874,000	2,337,383	0	128
Industrial *	0	461,000	983,000	3,231,600	0
Wilshire/Santa Monica **	5,677	1,416,000	1,101,000	0	0
Lincoln Corridor * South	0	394,000	91,000	0	0
Lincoln Corridor * North	0	173,000	80,000	0	0
TOTAL	0	567,000	171,000	0	0
Broadway *	1,506	57,000	115,000	40,000	0
Pico *	4,271	380,000	107,000	0	0
Sunset Park (incl. Airport Bus Park)	6,732	115,000	1,381,585	0	0
Ocean Park *	7,061	363,000	33,000	0	182
Montana & North	5,298	220,000	65,000	0	0
Douglas Park *	1400	0	0	0	0
Wilshire District **	12,231	0	0	0	501
Oceanfront *	730	31,000	196,000	0	172
Civic Center *	0	0	0	0	0
Subtotal	46137	5,484,000	6,489,968	3,271,600	983
Under Construction		5,000	824,000		
Development Agreement			615,000		830
Subtotal		5,000	1439,000		830
GRAND TOTAL	46137	5,489,000	7,928,968	3,271,600	1,813

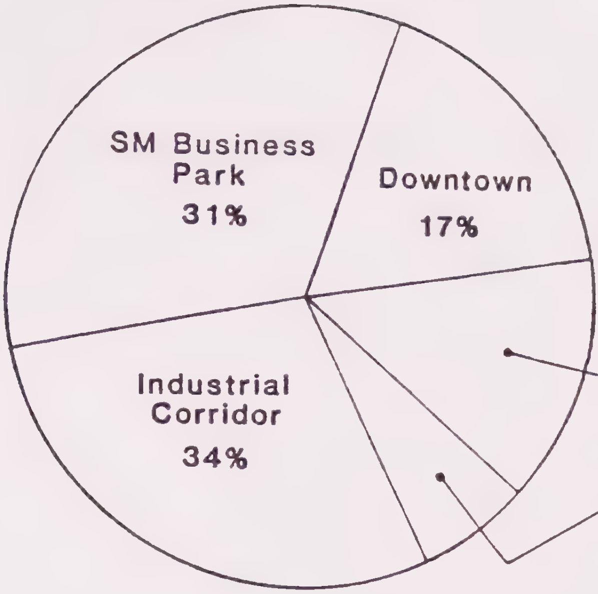
Building Permit Data 1975-82, City Files for Development Agreements, and the following supplemental sources:

- * Sanborn - Land Use Maps
- ** Updated Wilshire Corridor Bulk Analysis
- *** Updated 1978 Downtown Land Use Study

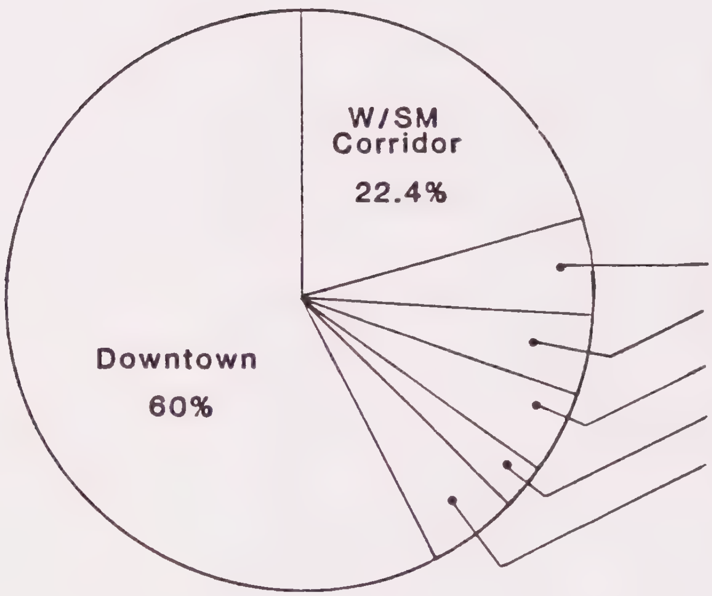
Note: Does not include institutional or utility space, or any space at Airport or Santa Monica Pier.

Source: Hall Goodhue Haisley and Barker

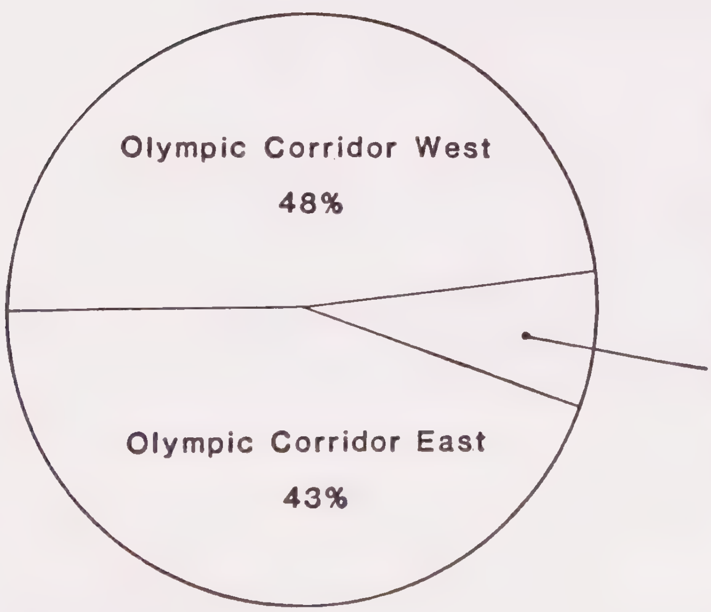
Figure 9:
LAND USE GROWTH 1975-82, BY AREA



OFFICE	sq ft	% of total
SM Business Park	1,286,585	31%
Industrial Corridor	1,381,400	34%
Downtown	643,900	16%
W/SM Corridor	555,400	14%
Other	215,780	5%
TOTAL	**4,083,065 sq ft**	



RETAIL	sq ft	% of total
Downtown	626,800	60%
W/SM Corridor	233,250	22.4%
Broadway/ North Pico	44,500	4.3%
SM Business Park	40,200	3.8%
Industrial Corridor	34,300	3.3%
Lincoln	18,930	1.8%
Other	43,057	4%
TOTAL	**1,041,038 sq ft**	



INDUSTRIAL	sq ft	% of total
Olympic Corridor		
-West of 20th Street	175,000	48%
-East of 20th Street	158,000	43%
SM Business Park	34,880	9%
TOTAL	**367,880 sq ft**	

Source: Hall Goodhue Haisley and Barker

There have been three generalizable types of office space built in recent years.

- "Corporate headquarters" or custom-type space, such as is common in recent construction along Wilshire Boulevard.
- "General" or speculative office space, primarily oriented to professional tenants.
- "Large-floor" space, a new hybrid that is suited both to the needs of certain office users (e.g., architects and engineers) and also to research and development users (e.g., advanced technology).

Since Santa Monica's current land use policy does not address desired form and character of development, many of the recent office buildings have exhibited materials, color, and massing alien to the surrounding context, and have caused excessive shading of public spaces and adjacent residential development.

Residents living near commercial corridors have complained of traffic incursion and parking shortages caused by commercial development in their neighborhoods. In addition, there has been growing concern that new office buildings have not contributed to the pedestrian environment at the ground level.

Retail -- There were over a million new square feet of retail constructed since 1975; Figure 9 shows their allocation by area. Much of this is accounted for by the unique occurrence of Santa Monica Place, a 476,000-square-foot complex of shops and restaurants located at the southern end of Santa Monica Mall. The Place is unique because of its magnitude, and a project of similar size is unlikely to occur in the Downtown in the next 20 years. Despite construction of this major regional shopping center, the rest of Downtown has received very little new retail investment.

After Downtown, the Wilshire/Santa Monica Corridor is clearly the most attractive area for new retail development. The other areas -- Broadway, Lincoln, Santa Monica Business Park, and the Industrial Corridor -- all received very small percentages of retail growth. Together they totaled 17 percent, while the Wilshire/Santa Monica Corridor alone received 22.4 percent.

Significant retail trends include growing "boutiquization" of previous neighborhood-serving retail uses, and the loss of a major supermarket on Pico Boulevard, leaving only five in the city.

Industrial -- Another important trend illustrated by analysis of changes since 1975 is that of a net loss of industrial uses -- a decrease of about 10 percent in acres of industrial use since 1975. The total new industrial space since 1975 was 367,880 square feet.

The majority of new industrial projects, both in number and in volume of space, have located in the western portion of the Olympic Corridor. Most of these projects fit the pattern of "incubator industry" -- new ventures needing a small amount of space and small lot size (less than one acre). This type of use is well suited to the typically small parcelization in the Olympic Corridor west of 20th Street.

In the eastern Olympic Corridor, where parcels are generally much larger, the typical development has not been traditional industry, but rather office or a mix of office with warehouse/distribution facilities.

Hotels -- Only since 1981 have new first-class hotels been proposed by developers and approved by the city. Until that time, little new hotel development had been discussed. Three projects currently being proposed, when constructed, should add about 830 new rooms to the city's hotel room inventory of 983 rooms. However, only about 300 of these rooms are to be built in the Oceanfront area of the city. About 130 rooms are proposed for an addition to a hotel that is located just east of the Oceanfront area, and 400 rooms are proposed for the Olympic Corridor in the Colorado Place development.

Areal Extent of Change -- Table 2 summarizes the change in the areal extent of land use in the period 1975 to 1982. The most important finding is the increase of commercial land use by 21 percent and the decrease of industrial land use by 10 percent during the same period.

Table 2 - Change in Land Use in Acres - 1975 to 1982

Use	1975 Total (1)	1982 Total	Change as a % of 1975
Residential	2370.5	2344 (2)	- 1.1
Commercial (retail and office)	314.7	381.7	+21.3
Industrial	414.6	372.6	-10.1
Public Recreation	221.4	233.8	+ 5.6
Other Public and Quasi-Public	443.4	431.7	- 2.6
Vacant Land	43.4	43.4	0
Streets and Rights-of-Way	1527	1527	0

(1) Source: Table 19 of 1975 Land Use Study
(2) Residential was obtained as the residual of all other uses.
Source: Hall Goodhue Haisley and Barker

Commercial Development Intensity -- The leading indicator of development intensity is the ratio of building area to lot area, commonly called the floor area ratio, or FAR. The FAR compares the area of a building to the area of its lot.

Table 3 illustrates the changes in development intensity from 1975 to 1982. Current average FARs remain extremely low: 0.64 for commercial and 0.2 for industrial. However, they have increased considerably since 1975: by 33 percent and 25 percent, respectively. This is a reflection of the comparatively high average FARs for recent projects: 1.0 for office, 0.72 for retail, and 0.36 for industrial.

The practical maximum development intensity of recent projects has to a great extent been limited by parking requirements. Office buildings have typically been six to twelve stories with four levels of below grade parking. A high water table and construction economics prevent deeper excavation. This yields a maximum intensity in the range of a 3.1 to 3.8 FAR. Most retail and industrial projects provide surface parking, except in the Downtown Parking District. The parking requirements generate an amount of parking equal to the amount of building square footage. This yields an intensity of 0.5 to 1.0 FAR.

Continued increase in land costs is changing these land utilization trends, however. In many areas of Santa Monica, it now costs a developer more to buy land for surface parking than to pay the cost premium for structured parking. In the future, it is likely that parking for retail uses will be accommodated in structures, except for a limited amount of convenience parking.

A second indicator of development intensity is building heights. Existing building heights are predominantly two stories over most of the city. This low "beach community" scale is exceeded only in a few locations, notably parts of Downtown, along Ocean Avenue and Wilshire Boulevard, and the hospital sites.

Residential Development and Density Trends -- Table 4 summarizes residential change from 1975 to the present, by area. These figures indicate that the majority of residential growth took place in neighborhoods nearest the ocean, the city's prime amenity.

The intensity of recent residential development has largely been determined not by the density allowable by zoning, but by parking requirements, combined with the standard 50 x 150 parcelization pattern. The typical recent project accommodates six units and the required two spaces per unit on a standard lot, yielding a net density of 35 units per acre.

Table 3:
CHANGE IN DEVELOPMENT INTENSITY, 1975 to 1982

Land Use:	Residential	Office	Retail	Office/ Retail	Industrial	Public & Quasi-Public	Vacant	Streets	TOTAL
1975:									
Acres (1)	2,370.5	---	---	314.7	414.6	664.8	43.8	1,527	5,335
SF or DU	44,263 units	3,845,903	4,442,962	8,288,865	2,904,120	---	---	---	---
FAR	---	---	---	.6	.16	---	---	---	---
1975-1982,									
New Acres	(26.5)	79.35	33.31	67.0 (2)	(40.6)	(11.7)	11	0	---
New SF or DU	500	4,083,065	1,041,038	---	367,880	---	---	---	---
Average FAR	---	1.0	.72	---	.356	---	---	---	---
1982:									
Acres	2,344 (3)	---	---	381.7	374.0	653.1	54.4	1,527	5,335 (4)
SF or DU	44,763	7,928,968	5,484,000	13,412,968	3,272,000	---	---	---	---
FAR	---	---	---	.8	.20	---	---	---	---
1975-1982,									
Acres	(1.1)	---	---	21.3	9.8	(2.6)	25	0	---
SF or DU	1.0	363	23.3	182	12.6	---	---	---	---
FAR (% Change)	---	---	---	33.3	25.0	---	---	---	---

(1) 1975 Land Use Study
(2) 67.0 acres does not correspond to (office + retail); it is net of loss to other uses in the 1975 - 1982 period.
(3) Residential change was a residual of all uses.
(4) Excludes annexation.

Source: Hall Goodhue Haisley and Barker

Except for considerable infilling of blocks nearest the Ocean, as discussed above, residential density has changed very little since 1975. Parking problems have occurred in some districts, primarily because older residential buildings do not have sufficient parking to meet current demand, forcing some residents and guests to park on city streets, and because new residential construction is not required to provide guest parking, and many older residential developments provided inadequate parking for tenants.

Table 4 - Change in Residential Units 1975-1982

Area	1975 Units	Net Change	1982 Units	Proposed Projects	% of Total Change
Montana and North	5,151	129	5,280	0	12.0
Douglas Park	1,397	11	1,408	0	1.0
Wilshire District	12,038	64	12,102	0	6.0
Wilshire/ Santa Monica Corridor	5,527	36	5,563	25	5.8
Downtown	1,721	-71	1,650	139	6.5
Broadway	1,518	-39	1,479	25	---
Pico (including Industrial Corridor)	3,764	29	3,793	55	8.0
Sunset Park	6,593	36	6,629	25	5.8
Ocean Park	6,554	305	6,859	276	55.5
Total	44,263	500	44,763	545	1,045 units

Source: Hall Goodhue Haisley and Barker

5.6 VISUAL

Santa Monica's visual environmental assets are generally composed of its low scale, light-colored buildings and its parks and scenic corridors, especially the views of beach and ocean.

A major visual liability is the cacophony of buildings, signage, parking, and unsightly uses mixed with good on highway commercial streets, especially Lincoln Boulevard, which is a major gateway route to the south. Another visual problem area is the amount of surface parking throughout the city, on the beach and fronting on the Promenade.

Some recent new commercial buildings have degraded the visual environment as a result of their height, massing, color, and use of reflective materials. Some new buildings have interrupted the pedestrian character of the sidewalk by introducing blank facades,

driveways, etc., in locations where shopfronts and other uses conducive to a pleasant pedestrian environment once existed or are desired.

5.7 TRAFFIC

Existing Street System -- The street network in the city of Santa Monica may be categorized as a grid system which is bisected by the Santa Monica Freeway. The alignment of the freeway impacts the city's circulation system in two ways:

- o It limits the number of through streets that cross the freeway.
- o It is a controlled-access facility, so that traffic bound to and from the Santa Monica area can gain access to the freeway at only a limited number of locations (interchanges).

Both of these aspects of the freeway alignment serve to concentrate traffic onto a limited number of streets.

Another factor that affects the city's circulation network is that traffic is concentrated on certain streets that provide connections to the surrounding street network of the city of Los Angeles.

The circulation analysis has concentrated only on those streets in Santa Monica which would probably be classified as residential collectors or above, in terms of design volume (see Traffic Appendix for definition). The existing circulation network containing those streets is illustrated in Figure 10. Streets not shown in this figure are classified as residential local or feeder streets intended to provide access between local residences and the street network.

Traffic Volumes -- Figures 11 and 12 illustrate the existing average daily traffic volumes on the major streets throughout the city and downtown. The most heavily travelled streets are those which provide linkages to either the street network of the city of Los Angeles or the regional freeway network. Also illustrated (circled numbers) are the locations where existing volumes exceed 75 percent of daily capacity and existing peak hour congestion problems are occurring. Those existing capacity locations are:

- o Lincoln Boulevard, south of Broadway
- o The Lincoln Boulevard Interchange
- o The eastbound on-ramp of the Cloverfield Interchange

The strategic locations of these three facilities, in terms of the access they provide, not only for Santa Monica-generated traffic, but also regional traffic, bound to and from the Santa Monica

Figure 10:

Functional Classification of Streets

Freeway

Arterial Street

Collector Street

Feeder Street

Note: Local streets not shown

Source: PRC Voorhees

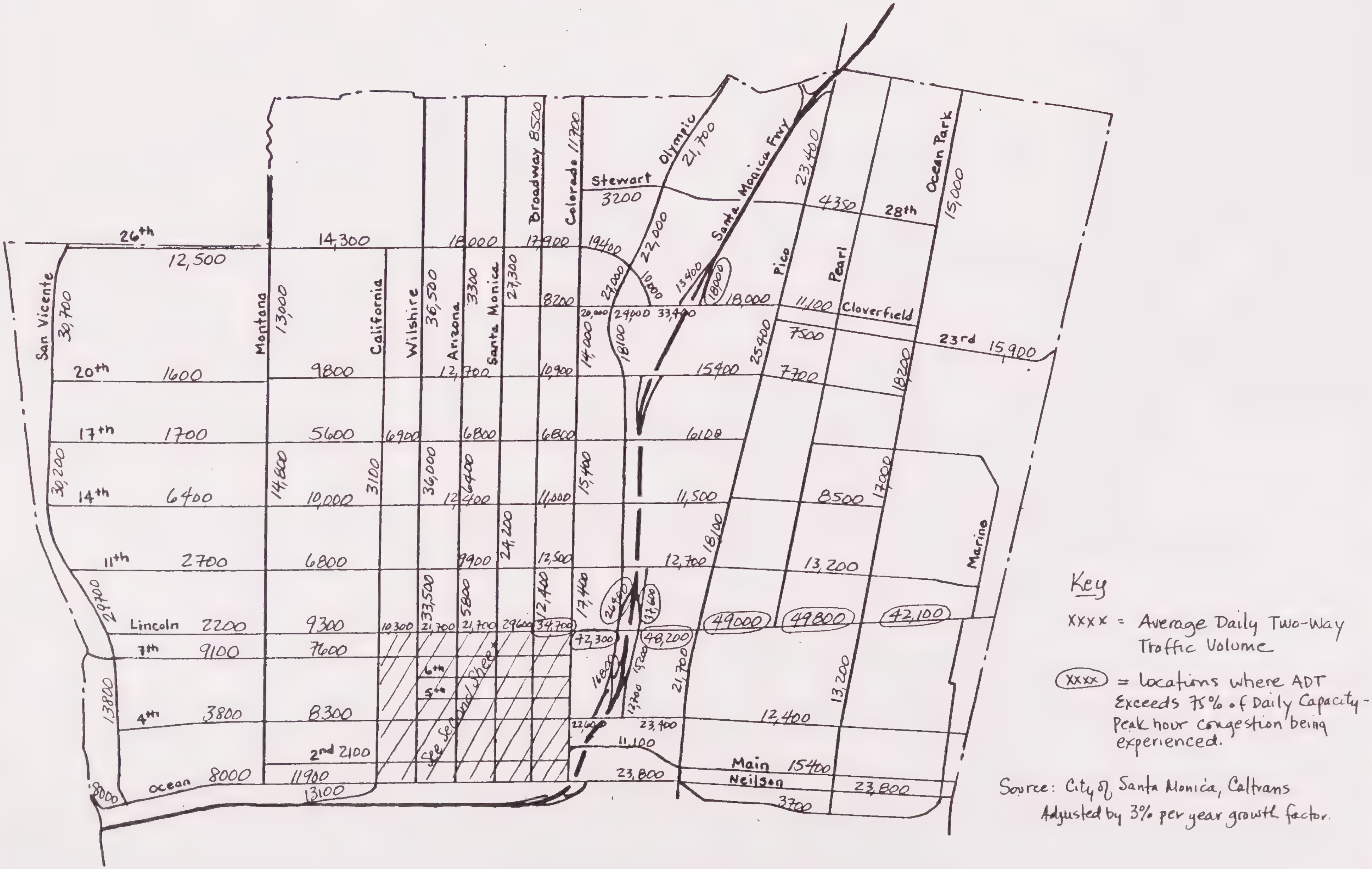
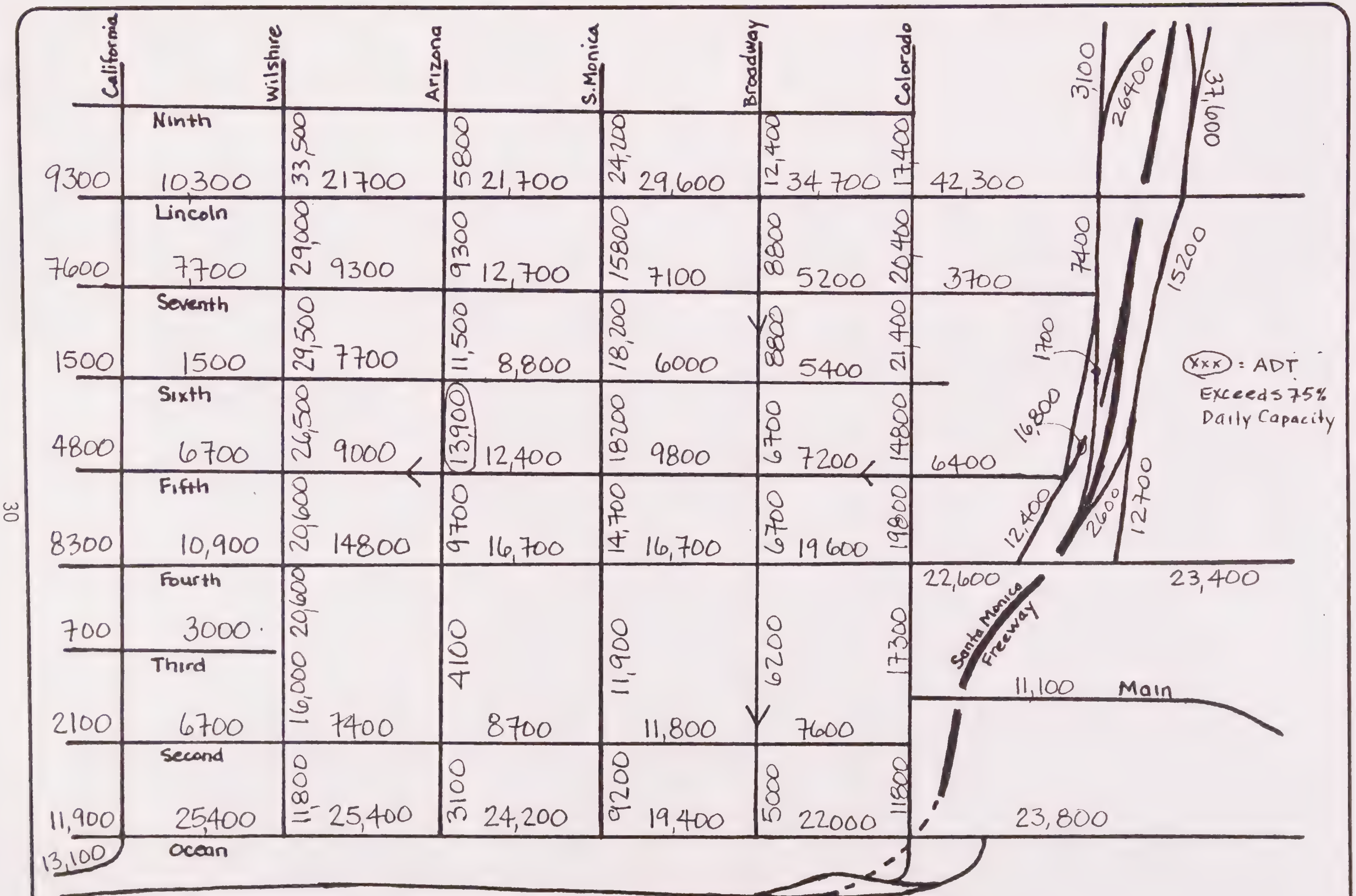


Figure 11:
1982 Citywide Average Daily Traffic Volumes



Source: City of Santa Monica, Caltrans
(Modified by PRC Voorhees to account for growth of 3% per year and conversion of Arizona and 6th Streets to two-way.)

Figure 12:
1982 Downtown Average Daily Traffic Volumes

PRC Voorhees

Freeway, cause them to be so heavily utilized. There are also not many alternative routes available to avoid using these facilities.

Lincoln Boulevard serves as the major access route into the city from the south. There are no other continuous major north-south routes extending from Santa Monica to beyond Marina del Rey, on the south. Most of the other streets extending south from Santa Monica end at Venice or Washington Boulevards, so that traffic utilizing these streets to travel farther to the south must eventually make its way onto Lincoln Boulevard. The two freeway interchanges cited must accommodate the majority of freeway-bound trips, particularly east-bound trips, for all of Santa Monica and portions of neighboring Los Angeles.

Although this analysis has been conducted on the basis of average daily traffic volumes that are typical of most days of the year, there are two conditions in Santa Monica that result in predictably higher than average volumes on a regular basis. The first of these is the Christmas shopping season, which results in higher than normal traffic volumes and parking demands in the Downtown, because of the high concentration of retail activities in that area.

The city has attempted to address this situation by providing a free shuttle service between the Civic Auditorium parking lots and Santa Monica Place during the Christmas shopping season.

The other condition that results in higher than normal traffic volumes is beach-oriented visitor traffic on summer weekends. Heavy flows of traffic to and from the beaches and their parking facilities on weekends result in significant congestion problems along the Oceanfront and at the Lincoln Boulevard and 4th-5th Streets Interchanges. The addition of the eastbound 4th Street on-ramp will help to alleviate some of the congestion that currently occurs at the Lincoln Interchange on weekends. Expansion of transit service to the beachfront could also potentially help to reduce the heavy traffic demands currently occurring in Santa Monica on good beach weather days.

Since the last city-wide circulation study was conducted in 1975, a number of changes related to circulation have occurred in Santa Monica. The most noticeable change has been the overall increase in traffic volumes as well as the rate at which traffic volumes have been rising. Between 1972 and 1975, traffic volumes on most of the streets that had experienced traffic increases were growing at the rate of 1-2 percent per year, and traffic volumes on many streets had actually decreased between 1972 and 1975. A similar comparison of the 1975 volumes to all available recent counts, taken from 1979 through the end of 1982, indicates that between 1975 and 1982, traffic on many of the city's streets was growing at an average rate of approximately 3 percent per year. Decreases in

traffic were very rare. Only on the eastern portions of Arizona and Broadway and on Ocean, south of Colorado, do volumes appear to have decreased.

In addition to the growth in traffic volumes, several changes have been made in the Santa Monica circulation network since 1975. Most of these changes have been geared toward decreasing the capacity of predominantly residential streets and de-emphasizing their use for through-traffic-carrying purposes where it was feasible to do so. Modifications to the striping on 26th, 11th, and 14th Streets have been implemented to convert them from four-lane streets (either all-day or during peak hours only) to two-lane streets, with continuous left-turn lanes.

An experiment with traffic diverters was tried on Washington Street, between 20th and 26th, and these were ultimately replaced with permanent speed humps. The intention of these traffic control measures was to reduce the speed of traffic in this residential area, rather than to reduce the volume of traffic by diverting traffic onto alternate streets.

Two of the one-way streets in Downtown, 6th Street and Arizona Street, were returned to two-way traffic flow, thereby reducing their traffic-carrying capacities. The 1981 Central Business District Intersection Capacity Analysis Study identified only one intersection in Downtown that was operating at worse than a Level of Service B (see Appendix B for definition). Operating conditions at that intersection, Santa Monica Boulevard at 4th Street, have since been improved through the implementation of left-turn prohibitions on Santa Monica and restriping of 4th Street to provide left-turn lanes. The other two problem intersections cited in that study were the two intersections on Lincoln Boulevard at the Lincoln Boulevard Interchange.

5.8 PARKING

The supply of parking in Santa Monica can be categorized into three types of parking:

- On-street parking
- Public off-street parking
- Private off-street parking

On-street parking refers to parking provided along the edge (curb or shoulder) of a street and can be either free or metered; unregulated, as far as usage, or restricted; either by time, length of stay, or eligibility to park. Public off-street parking refers to publicly provided (owned and/or operated) off-street parking facilities; either surface lots or parking garages. In this

context, private off-street parking refers to parking provided on private property. It can be restricted as far as usage, to particular users or open to the general public.

The city has direct control over the first two categories of parking and indirect control, through zoning regulations and the development review process, over the third type of parking.

On-Street Parking -- Detailed information regarding the supply and usage of on-street parking is not available for most areas of the city, other than Downtown and the Main Street area. Complaints from residents, businessmen, and employees in a number of neighborhoods in the city regarding the lack of available on-street parking do, however, provide an indication as to where on-street parking is most heavily utilized. Those areas primarily include:

- The higher-density residential neighborhoods in the Ocean Park area and the areas north and east of Downtown, between Montana and Colorado, extending east to 14th Street.

- The residential areas surrounding St. John's and Santa Monica Hospital Medical Centers.

- The residential area surrounding Santa Monica College.

- Large portions of the Industrial Corridor.

- Blocks immediately adjacent to and/or between commercial corridors.

There are a number of contributing factors that result in a shortage of available on-street parking spaces. The key contributing factor is the lack of adequate off-street parking provided by many existing developments for either customers, visitors, or employees. A second factor is the expense associated with off-street parking and the tendency of many employees to search for a free on-street space, rather than pay the cost of off-street parking.

Public Off-Street Parking -- Public off-street parking has been provided by the city of Santa Monica Parking Authority in both surface lots and parking structures. Off-street lots containing in excess of 1,200 spaces have been provided in scattered locations primarily near the Main Street commercial district, in Downtown, and along Wilshire Boulevard. Parking utilization data for all of these lots were not available, but as previously cited, they are well utilized. The lots along Neilson Way, near Main Street, are heavily used, and the city has studied the feasibility of constructing a 400-space parking structure above the Neilson Way lots between Hill and Kinney Streets to relieve parking pressures in this commercial district.

The costs associated with construction of the parking structure have made the merchants along Main Street reluctant to agree to financing it solely through a benefit assessment district. There is a large amount of state-owned surface parking along the beach. These lots receive heavy "surge" use on summer weekends, but are largely vacant during the week. In addition, there is a large, city-owned maintenance yard along the beach immediately north of Santa Monica Pier.

Structured public parking has been developed Downtown by the city through the use of a parking assessment district, as well as the redevelopment process. The eight city parking structures Downtown contain close to 4,700 spaces, most of which are available for free public parking with a three-hour time limit. Several of the parking structures experience very high rates of parking occupancy, particularly on weekends. It appears that the overall supply of off-street parking Downtown is adequate to meet existing demands and accommodate some future development.

It should be noted that only Structures 4 and 6 have been built to their full design capacities. Four additional floors of parking could be added to Structures 1, 2, 3, and 5, increasing the supply of parking in each structure by 300 spaces. Thus, the existing supply of off-street parking Downtown could be increased by 1,200 spaces without devoting additional land to parking.

Private Off-Street Parking -- The minimum amount of off-street parking that must be provided by new private developments is specified in the city's zoning ordinance. A preliminary review of the parking requirements for residential, commercial, and hotel land uses was conducted to determine if any changes to these requirements appear warranted in order to prevent future development from exacerbating on-street parking problems by not providing enough off-street parking to meet their needs on-site.

In the medium- and high-density residential neighborhoods, the on-street parking problem appears to be most critical in the evening hours, indicating that adequate off-street parking for residents and their visitors is not readily available.

In the commercial districts, the on-street parking problems appear to be related to one of three factors: (1) Businesses located in buildings that provide either no off-street parking or inadequate off-street parking to meet the needs of current tenants, (2) At some office developments, the monthly cost to park in the development's parking facility is higher than many employees are willing to bear and they park on the street instead, or (3) retail establishments prefer to devote all or most of their parking supply to customer parking, and employees are encouraged to park on the street.

The demand for parking at office developments varies, depending upon the type of office and tenant mix, but generally falls within the range of one space per 250 square feet to one space per 333 square feet. Santa Monica's requirement falls within this range and is probably adequate to meet office parking demands off-street.

The spillover of office parking onto the street must, therefore, be attributable primarily to cost rather than supply.

Retail parking demands also vary considerably from one retail establishment to another. Santa Monica falls at approximately the mid-point in the range of parking requirements for retail establishments currently in effect in California. A more detailed analysis than was possible in this project, including collection of empirical data at Santa Monica retail land uses, would be required to state definitively whether or not Santa Monica's retail parking requirement needs to be modified.

The current parking requirement for hotels in Santa Monica is the following:

- One space per room for first 40 rooms
- One space per 3 rooms, in excess of 40 rooms
- One space per 250 square feet of restaurant or other commercial space

The Zoning and Planning Standard Guidelines for Parking, published by the Institute of Transportation Engineers, recommends a minimum requirement of one space per room, plus 0.5 spaces per employee, for hotel developments of any size.

5.9 TRANSIT

Existing Modal Split -- It was estimated that approximately 24,750 transit trips are generated daily in Santa Monica. The total number of vehicle trips generated in the city was estimated at 501,400. The estimated mode split between transit users and automobile users for Santa Monica was therefore determined to be close to 5 percent on a daily basis, compared to 3 percent region-wide. The peak hour mode split is estimated to be approximately 12 percent, utilizing the same proportion (peak-to-daily) as is experienced in the Los Angeles region.

Transit Service -- Public transit service in the city of Santa Monica is provided by two transit agencies, the Santa Monica Municipal Bus Lines (SMMBL) and the Southern California Rapid Transit District (SCRTD). The presentation of information related to transit service in this study concentrates on the SMMBL, because it is a city-controlled agency and the one over which city of Santa Monica policy makers can exert the most direct influence.

The SMMBL is the primary transit operator serving the Santa Monica Bay Area. The system provides local fixed route services within the city of Santa Monica, as well as serving the districts of Pacific Palisades, West Los Angeles, Brentwood, Westwood, Cheviot Hills, Westchester, Marina del Rey, and Venice within the city of Los Angeles. In addition, the SMMBL provides some regional transit services, including a freeway express bus line to downtown Los Angeles. Regular fixed route services on 12 individual routes are supplemented by school-oriented transit services and special recreation and excursion services primarily for senior citizens.

The streets served by SMMBL are shown on Figure 13. The greatest levels of service are provided on Wilshire, Santa Monica, and Pico Boulevards, where headways (time between bus runs) average 10 minutes throughout most of the day. Headways on the routes serving other streets in Santa Monica vary from 15 minutes on Ocean Park to 20 minutes on Lincoln and Montana and 30 minutes on Olympic, during most days.

Connecting Transit Services -- Currently, both the SCRTD and Culver City Municipal Bus Lines (CCMBL) provide transit services within the SSMBL service area. Eighteen SCRTD lines are operated in the SMMBL service area, while all six lines operated by CCMBL have transfer or connecting points with SMMBL lines. Additionally, SMMBL's Line 10 provides connections in downtown Los Angeles with service operated by the Montebello Municipal Bus Lines (MMBL), as well as a number of SCRTD lines.

Seven of the SCRTD lines provide service within the city limits of Santa Monica. Those lines, which primarily provide service between downtown Santa Monica and downtown Los Angeles, operate on San Vicente Boulevard, Santa Monica Boulevard, the Santa Monica Freeway, and Ocean Avenue-Main Street. In addition to the route connecting the two downtown areas, Line 434 provides a connection from Santa Monica to the Malibu area, via Pacific Coast Highway.

5.10 NON-MOTORIZED TRANSPORTATION

Bicycle and Pedestrian Facilities -- Existing and proposed bicycle facilities in the city of Santa Monica (as of May 1981) are shown on Figure 14. Most of the areas of the city of Santa Monica have a bicycle facility either proposed or existing within them. The one major area of the city that does not currently have any streets designated as bicycle routes is the southeast portion of the city, in the Pico and Sunset Park neighborhoods. Also, a north-south bicycle facility connecting this area to the north side of the Santa Monica Freeway has not been designated.

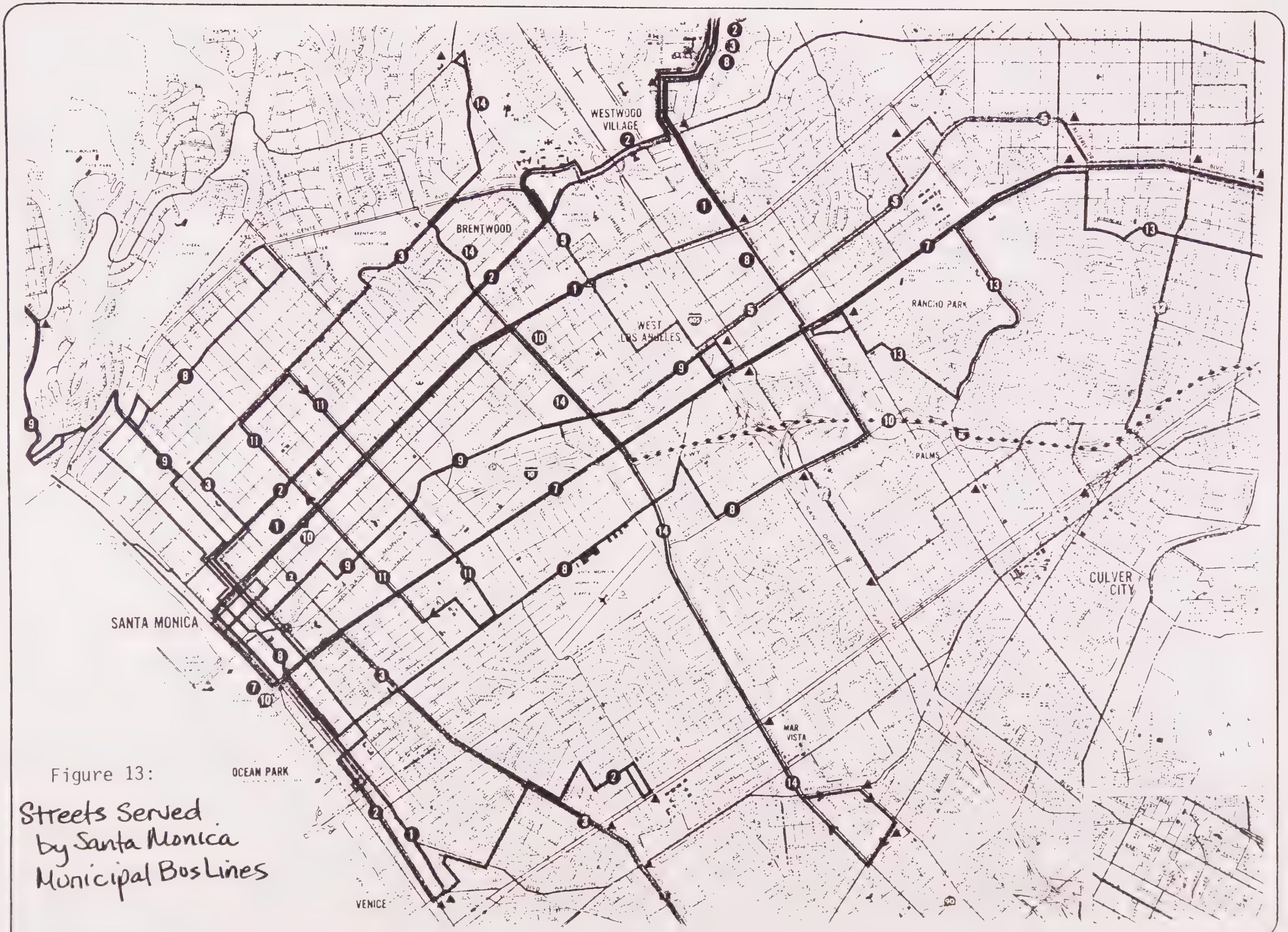


Figure 13:

Streets Served by Santa Monica Municipal Bus Lines

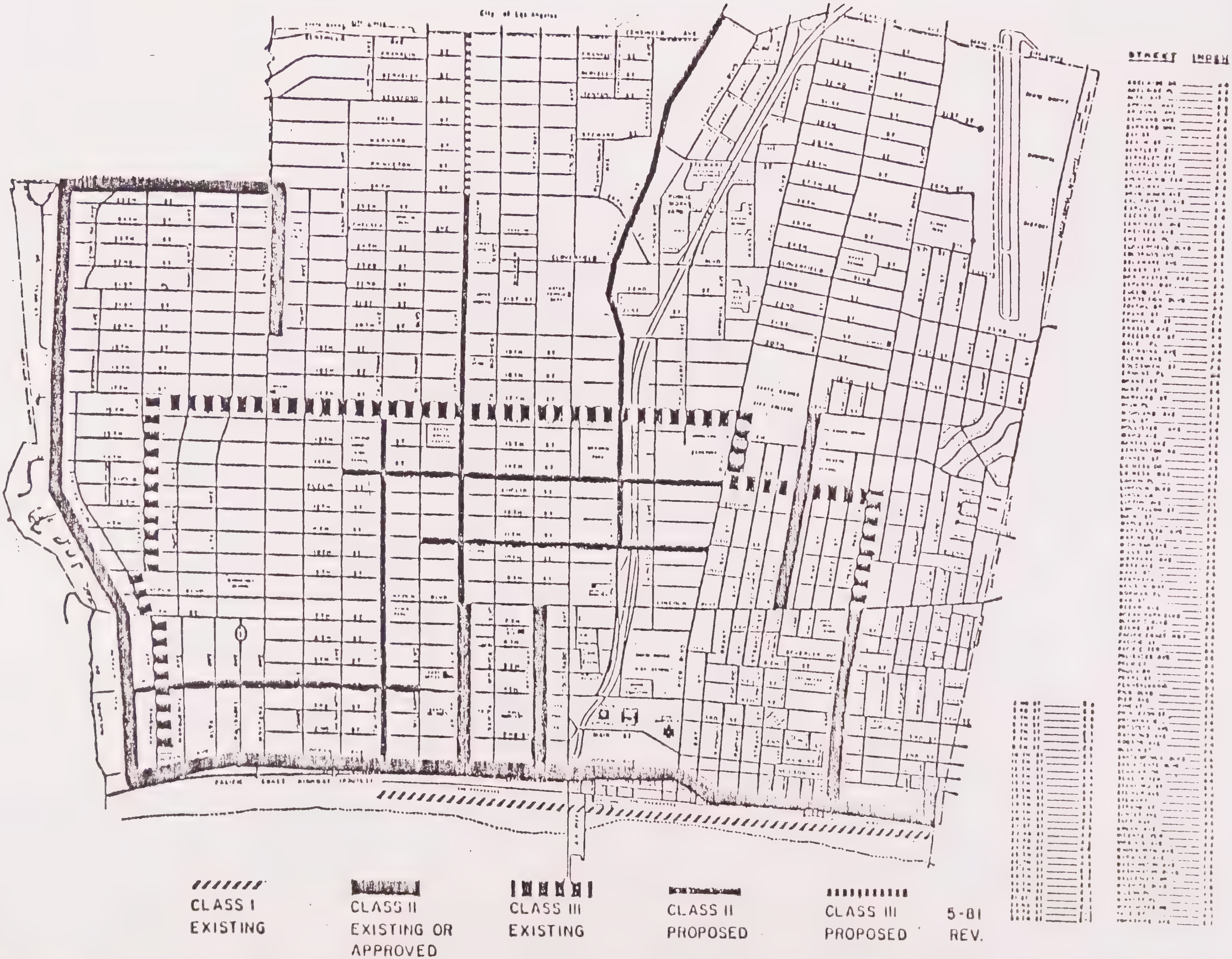


Figure 14: Existing Bike Routes

Source: City of Santa Monica

A limited number of exclusive facilities for pedestrians, besides sidewalks along all major streets, are currently provided in Santa Monica. Existing pedestrian facilities include:

- o The Palisades Park Walkways
- o The promenade along the beachfront
- o The Santa Monica Mall, along Third Street between Wilshire and Broadway

Accessibility for the Disabled -- Wheelchair ramps have been provided at most intersections in Downtown and along Wilshire and Santa Monica Boulevards. It is a continuing program of the city to implement wheelchair ramps at the rate of between 50 to 100 per year, utilizing primarily Community Block Grant funds to finance their implementation.

5.11 NOISE

Existing Noise -- The major generators of noise in the city are traffic and aircraft. The 1975 noise environment is described in the city's Noise Element of the General Plan. Noise sensitive areas in 1975 are similar to those existing in 1982 and are identified in Figure 15. The "Noise Sensitive Areas" occur along the corridors of heaviest traffic, mainly the Freeway, Pacific Coast Highway, and Wilshire, Santa Monica, Lincoln, and Colorado Boulevards.

As part of this report, the change in the noise environment between 1975 and 1982 was calculated for major road segments within the city (see Figure 16). This analysis was based on changes in traffic volume and does not take into account any variations in aircraft noise. Road segments with no decibel change noted have a change of less than one decibel. As can be seen in Figure 16, noise levels are calculated to have increased by at most only one decibel anywhere in Santa Monica, except along 11th between Pearl and Ocean Park, where noise levels are calculated to have increased two decibels since 1975. These changes in noise level would typically not be noticeable. In residential areas where these increases have occurred, approximately 2 percent more people would say that they are more annoyed with their noise environment than would have been the case in 1975. The acoustical criteria used for this assessment are extracted from "Guidelines for the Assessment of the Impacts of Aircraft and Street Traffic Noise in Residential Areas," prepared by Carl D. Kreiter, Ph.D., for the Office of the City Attorney of Santa Monica, California, September 15, 1982. Page 23 of this report is reproduced here as Figure 17. This figure shows absolute levels of noise considered to be compatible with street traffic in Santa Monica and also the percentage of people who would be annoyed with their noise environment with increases in noise level.

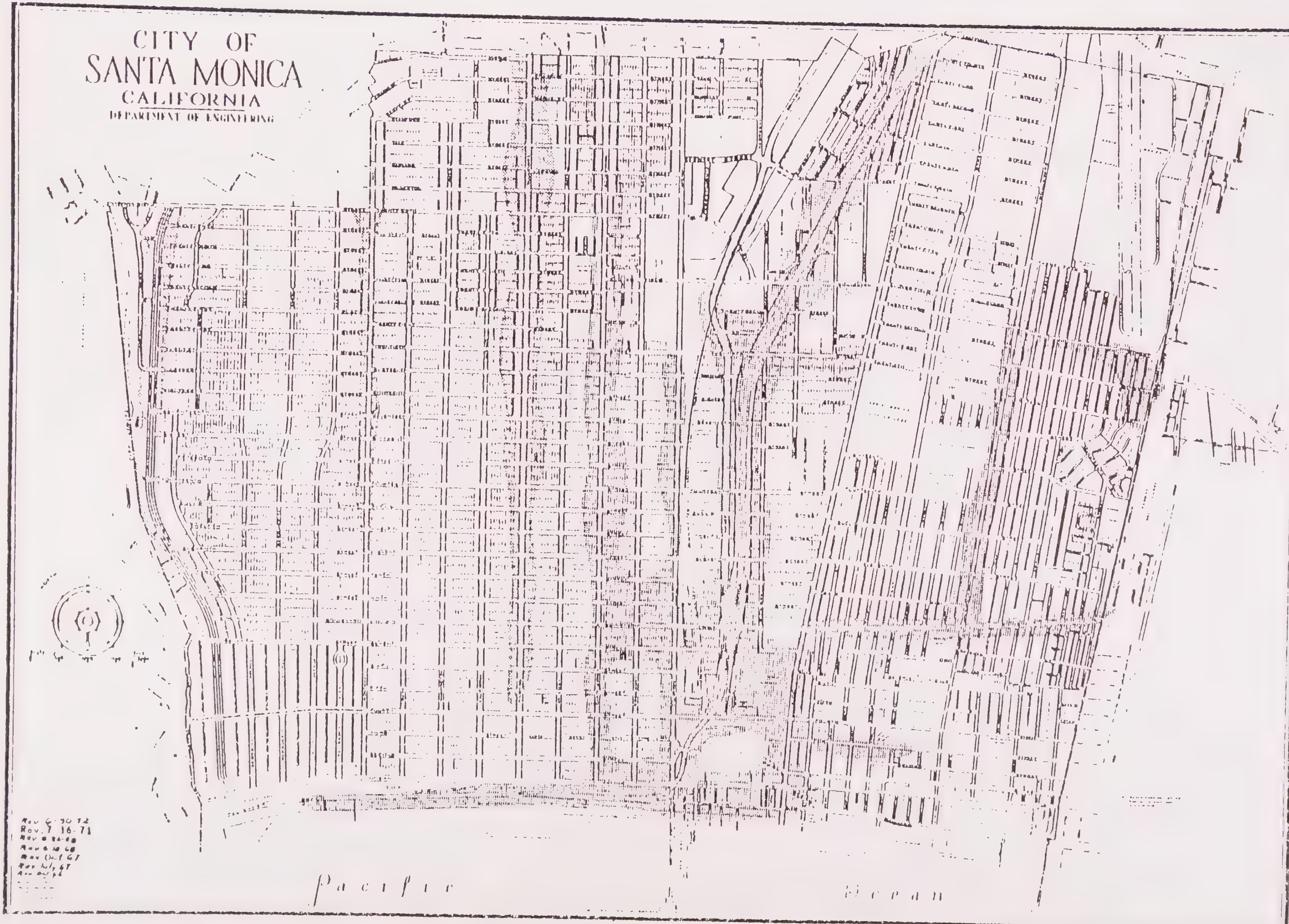


Figure 15: Noise Sensitive Areas, 1975

Source: Noise Element

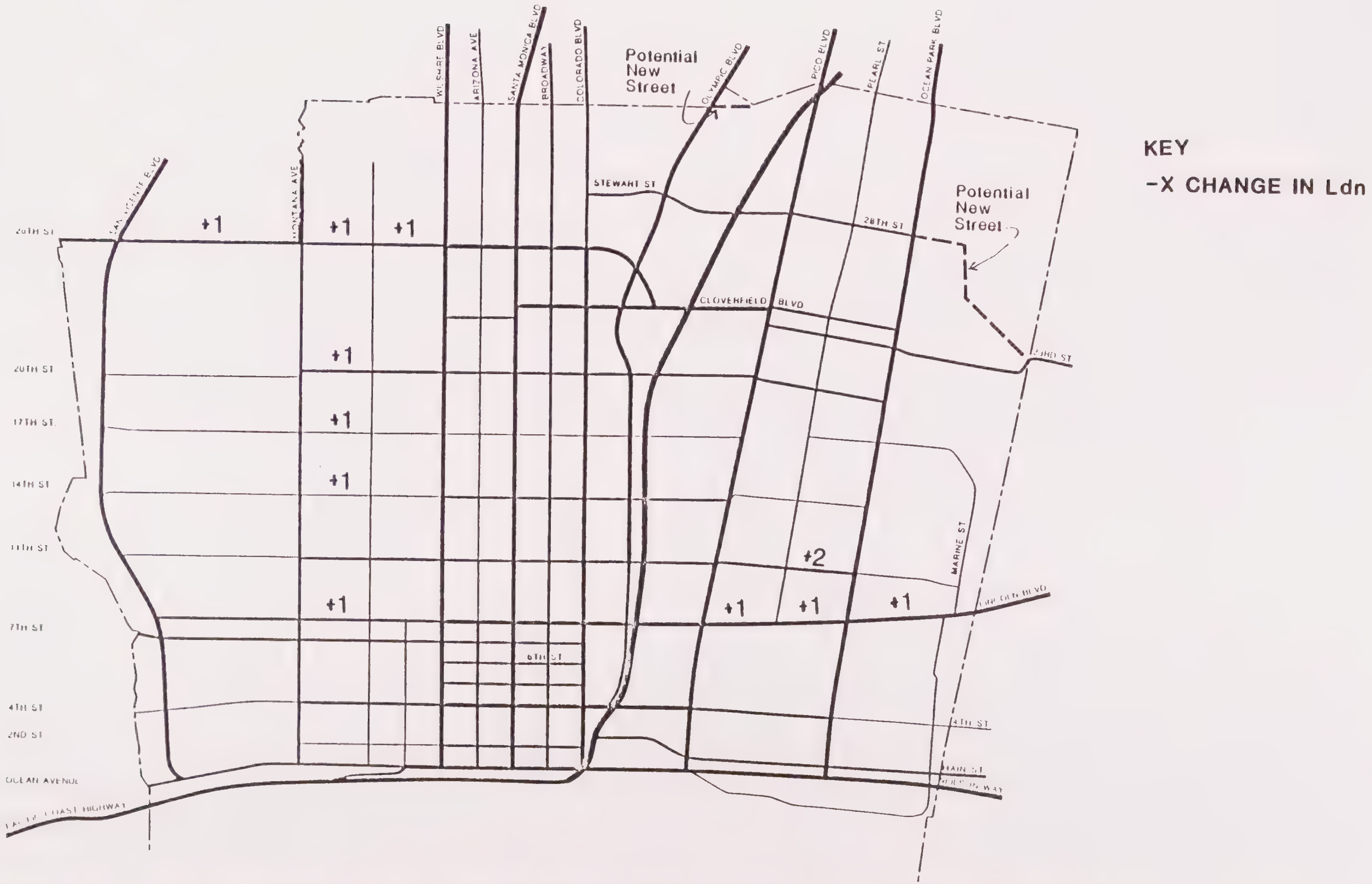
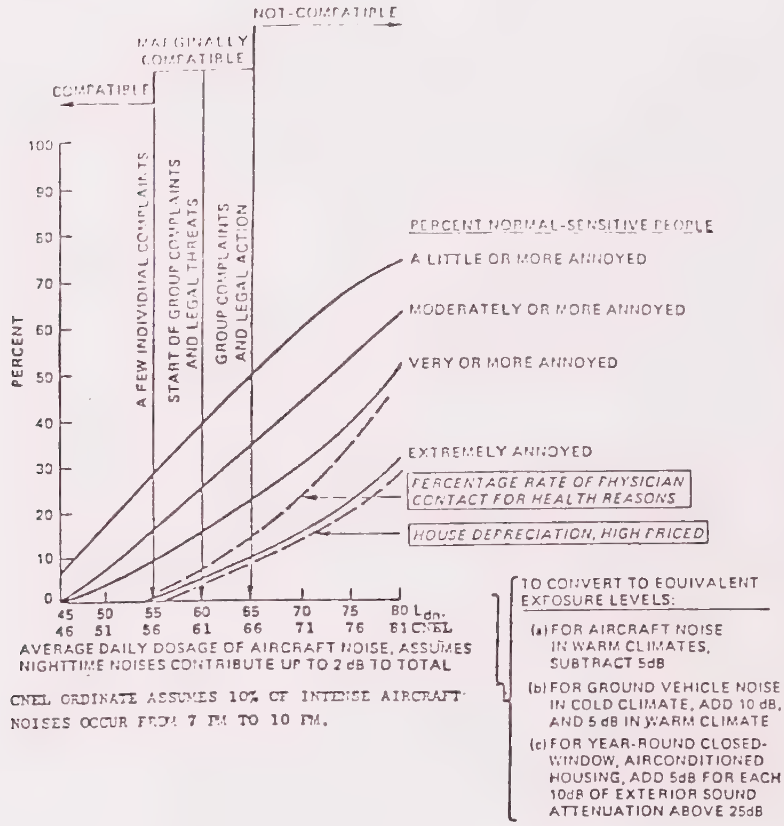


Figure 16: Citywide Changes in Noise Levels between 1975 and 1982 Source: Charles M. Salter Associates, Inc.

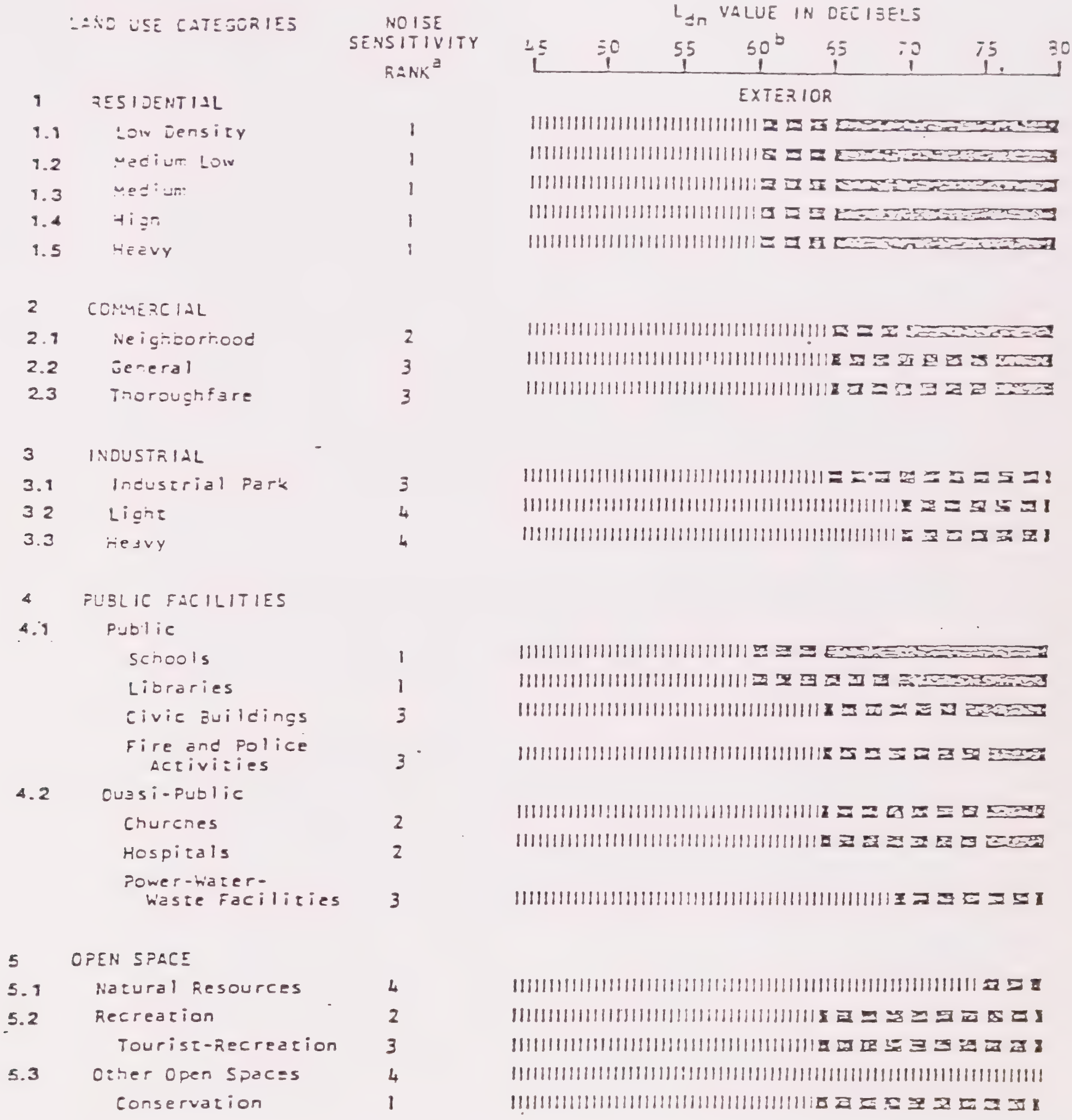
Figure 17. Acoustical Criteria



Graph showing, as a function of exposure level, effects of aircraft noise on annoyance, health, housing values and complaint activity. Also indicated are suggested compatible and non-compatible threshold levels for residential living and corrections to be applied for use with ground vehicle noise in warmer (e.g. southern European and U.S.) climates. Noise dosage is expressed in composite daily units used in the U.S.. The curves showing percent depreciation in housing values, percent of normal-sensitives annoyed, and degrees of complaint behavior, and percent increase in physican contact for health problems are from data and graphs in the Appendix.

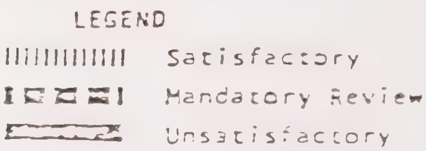
Source: "Guidelines for the Assessment of the Impacts of Aircraft and Street Traffic Noise in Residential Areas," Carl D. Kreiter, Ph. D., Office of the City Attorney, Santa Monica, September 15, 1983.

Figure 18: Noise Exposure/Land Use Compatibility Chart



[a] Rank of 1, most sensitive; 4, least sensitive.

[b] Noise Referral Zone on Noise Contour Maps.



Source: Noise Element

Noise Compatibility Standards -- The Noise Element of the General Plan sets out a Land Use Compatibility Chart for Community Noise in Santa Monica (Figure 18). The upper limit for the most noise sensitive uses, such as residential, schools, and library use, is 65 db Ldn (db is an abbreviation for decibel, a noise measurement; Ldn is a modifying weighing factor which places greater significance on noise events occurring at night), and 75 db Ldn is the upper limit for commercial and public uses. Above 75 db Ldn, only industrial and open space uses are compatible with the high noise exposure. As the chart shows, there is a range immediately below the maximum limits where mandatory project-by-project review is recommended, in order to encourage noise mitigation measures to be incorporated into the site plan and structural design. In addition, existing land uses located in noise exposure zones above acceptable levels may be required to provide remedial sound-attenuation measures. In recent years only two special noise studies have been required, one for the Kendall project at Colorado and Ocean and another for a residential project on 20th Street. In both cases, the high noise exposure was mitigated by measures such as double glazing and special window gaskets.

5.12 AIR QUALITY

Existing Air Quality -- The same atmospheric conditions that create the desirable temperate climate in Santa Monica discussed in Section 5.1 combine to restrict severely the capacity of the atmosphere to disperse the region's air pollution generated by the large population attracted to the Los Angeles region by the climate.

Santa Monica has two distinct types of weather patterns that control air pollution levels in the area. In summer, moderate onshore winds ventilate the coastal corridor and push air pollutants inland. This inland pollution "cloud" is capped by a massive dome of warm air that traps all pollutants within a shallow layer near the ground. As this trapped layer moves inland, it undergoes photochemical reactions and gives inland valleys extremely unhealthful ozone levels. Some of this smog forms in Santa Monica as well, especially when the previous day's smog blows seaward at night and then recirculates through Santa Monica the next morning, but these diluted levels are much lower than those found in inland valleys. In winter, especially at night, the land becomes cooler than the ocean. The land breeze that is established reverses the roles of sources and receptors as pollution from inland valleys drifts seaward. These light breezes are accompanied by shallow pooling of cold air that forms radiation inversions. When the breeze becomes almost calm between the reversal of the daily sea and nocturnal land breezes, local stagnation of pollutants may occur. This situation often occurs in conjunction

with the traffic rush hour and leads to pollution "hot spots" near traffic sources such as freeways, large parking lots, and major arterial intersections.

Ambient air quality distributions, as measured by the South Coast Air Quality Management District (SCAQMD) at its West Los Angeles monitoring station, reflects the dominant role of meteorology in controlling air quality patterns. Clean air standards for photochemical smog are frequently exceeded during the warmer months, but the maximum violations occur at close to the first stage smog alert level of 0.20 ppm of ozone (hourly average) compared to second stage alert levels of 0.35 ppm in inland communities. Federal ozone standards are exceeded 30 times per year, with an average of 3 first stage alerts per year. While summer air quality in Santa Monica is among the best in the Los Angeles Basin, winter air pollution levels are among the highest. The combination of local sources of automotive pollution during rush hour and elevated background levels from seaward drift of pollution from several million cars produces very high levels of nitrogen oxides and carbon monoxide along the coastal corridor.

Dust levels are low along the coastline compared to those of inland communities, but some of the particulate matter in Santa Monica is composed of gaseous emissions that have undergone chemical changes to become liquid hydrocarbons or solid sulfates and nitrates which produce adverse biological reactions.

Long-term trends in air quality, especially those directly related to automobile exhaust, show a significant improvement for many types of pollutants. Levels of lead, nitrogen oxides, and, to some extent, carbon monoxide, have continually improved within the last 10-15 years. Ozone levels near Santa Monica have, however, stagnated at close to the first stage alert levels for a long time and show little evidence of significant improvement in the near future. Trendlines of Santa Monica air quality suggest that clean air goals for carbon monoxide and nitrogen dioxide will be reached within the next ten years, but extrapolation indicates that ozone levels will exceed federal standards for at least another 20 years. Considerable improvement in ozone levels was made in the late '60s and early '70s, but there are just too many sources of emissions and the meteorology is too restrictive to expect complete attainment soon without major disruptions in industry, transportation, lifestyle, and economics (see Appendix C for further detail).

Air Quality Planning -- The Clean Air Act requires that an air quality management plan (AQMP) be prepared for every airshed in which federal clean air standards are expected to be exceeded. The Act requires that all areas of the country meet all standards by 1987, provided that reasonable further progress is demonstrated in the years 1982-1987. Growth-related emissions are incorporated

into the AQMP through regional growth forecasts based upon local general plans and through regional transportation improvement plans. Changes in the land use elements of local general plans must be as consistent as possible with the forecasts incorporated into the AQMP in order not to encourage the development of unanticipated air pollution emissions distributions. If changes in the local general plans decrease the intensity of development, or if they modify land uses to conform better to regional transportation plans (RTPs) that are designed to facilitate implementation of transportation control measures (TCMs) that reduce traffic generation, then those changes represent a positive air quality benefit.

5.13 PARKS AND RECREATION

Service Providers -- Santa Monica Recreation & Parks Department, County of Los Angeles, State Department of Parks and Recreation. City Open Space Standards and Fees -- The Parks and Recreation Commission has set a standard of 2.5 acres per 1,000 population. Based on this standard, there is a city-wide need of 220 acres of open space, based on 1980 population.

To provide new parks, there is a $200-per-unit Recreation Dwelling Unit Tax for each new condominium or rental unit built, which, at current land values, would yield approximately 4 square feet of park per new residential unit. Two recent development agreements -- for the Becket and Greenwood projects -- have required dedication of open space for approval (Becket, an implied 1.3 acres per 1,000 employees; Greenwood, approximately 1.56 acres per 1,000 employees).

City Facilities -- There are 172.5 acres of public recreation space suitable to meet the above open space standard in Santa Monica, as itemized in Table 5 and illustrated in the Public and Quasi-Public Ownership map.

Regional Facilities -- There are two county parks in the vicinity: Baldwin Hills County Park in Culver City, approximately 4 miles away, and the Marina in Marina Del Rey, 1-1/2 miles south of the Santa Monica city limits. The nearest state park is the Santa Monica Beach, and there is the Santa Monica Mountains National Recreational Area.

Excess Capacity or Deficiency -- Based on the above figures, Santa Monica is deficient by 47.5 acres in fulfillment of the usable open space standard (172.5 acres exist, as opposed to the 220 acres required currently). Even if the city made it its policy to increase the amount of park space, it is clear that there is virtually no land available in the residential neighborhoods.

Table 5 - Public Recreational Facilities and Open Space

Parks	Acres	Areas to Meet Open Space Standard **
Palisades	28.1	
Clover Park	13.4	
Memorial	10.5	
Marine	7.0	
Los Amigos	5.6	
Virginia Park	4.9	
Lincoln	5.5	
Douglas	4.2	
Stewart Street	2.5	
Joslyn	2.3	
Mary Hotchkiss	2.1	
Crescent Bay	1.6	
Ashland Park	1.4	
Garden Plots	.7	
Ozone	.7	
Sunset Park	.4	
Pacific Street	.4	
Park Drive	.3	
Subtotal, Parks	88.9	88.9
School Playgrounds	37.0	37.0
Beach, excluding parking lots	208.7	31.3*
Open Space		
San Vicente Median	8.7	8.7
Olympic Median	6.6	6.6
Mt. Olivette Reservoir	2.4	
Fourth Street Median	1.3	
Barnard Way Median	1.1	
Miscellaneous	3.0	
TOTAL	352.5	172.5

* 15 percent of total, based on license plate survey to determine use by Santa Monica residents.
** 2.5 acres per 1000 population

Sources: Santa Monica Department of Recreation and Parks
Hall Goodhue Haisley and Barker

Additional usable open space to meet forecast population growth could be gained only by incorporation into future development in the commercial industrial areas and/or acquisition of underutilized or vacant school sites.

It is important to note that there is no open space standard for daytime population. This is especially relevant since the recent Office Development Fiscal Impact Report prepared by HRS indicated that 40 percent of the office workers use city parks, and 82 percent of office workers are not Santa Monica residents.

5.14 POLICE PROTECTION

Service Provider -- City of Santa Monica

Existing Facilities and Standards -- The one police station is located at City Hall; estimated emergency response time is 2-1/2 to 3 minutes.

Current level of service is perhaps best expressed as 1.5 police officers per 1,000 population (current population is approximately 88,000). However, daytime population rises to approximately 110,000, or 1.3 officers per 1,000. Beach day surges reach 250,000-330,000.

Demand for police protection is not only a function of population, but also frequency of calls for service. There has been a doubling of calls for service in the last twenty-five years, even though the population has remained relatively constant.

5.15 FIRE PROTECTION

Service Provider -- City of Santa Monica

Existing Facilities and Standards -- There are four fire stations in the city, staffed by twenty-nine firefighters at all times. (There are three shifts, thus two additional firefighters for every one on duty.) The city recently received an I.S.O. Rating of 2 out of 10; the highest rating is 1. Current staffing is .33/1,000 resident population, or .26 per 1,000 daytime population.

5.16 SCHOOLS

Service Provider -- Santa Monica-Malibu Unified School District.

Existing Facilities -- Acreages of School District properties in Santa Monica are listed in Table 6. Enrollment levels are below the capacity of the schools at all levels (Table 7). For this reason, a special committee was formed to consider possible uses for excess school properties.

Table 6 - Santa Monica-Malibu Unified School District Acreage

Site	Approximate Acreage
Edison	5.25
Franklin	5.60
Grant	6.15
Madison	4.41
John Muir	4.60
McKinley	6.48
Rogers	7.75
Roosevelt	5.98
Washington	2.82
John Adams	16.50
Lincoln	8.06
Samohi	27.00
Olympic	4.50
Colorado Site	6.00
Administration	3.00
Ocean Park Children's Center (2526-6th Street)	2.00

Source: Santa Monica Malibu Unified School District

Table 7 - School Enrollment and Capacity

	Estimated Capacity	Projected 1982-83	vs (Actual) 1982-83	Projected 1983-84	Projected 1984-85
Edison	609	421	(470)	415	409
Franklin	896	709	(713)	682	656
Grant	704	525	(508)	512	499
Madison	480	332	(349)	314	298
McKinley	736	434	(452)	396	361
Muir	576	415	(372)	389	364
Rogers	800	559	(597)	529	500
Roosevelt	640	521	(550)	478	438
Total K-6	6050	3916	5190	3715	3525
Adams		993	--	952	913
Lincoln		1176	--	1127	1081
Alternative (Washington)		145	(166)	145	145
Total 7-9		2314	166	2244	2139
Samohi		2716	--	2571	2435
Olympic		260	(209)	260	260
Total 10-12		2976	209	2831	2695
Special Day Class		300	--	315	315
Total Santa Monica Enrollment		9506		9105	8674

Source: Santa Monica-Malibu Unified School District.
Hall Goodhue Haisley and Barker

The 1982-83 Projections were based on present enrollment, average rate of increase/decrease, birth rate, and community changes. The 1983-84 and 1984-85 enrollment is based on a ten-year increase-decrease average applied to the 1982-83 enrollment and the 1983-84 enrollment respectively.

Note: Enrollment forecast below 420 pupils is the threshold for considering school closings, according to the School Superintendent.

5.17 WATER

Sources of Supply -- Water supply is obtained both from the Municipal Water District (MWD) and from wells owned by the city of Santa Monica. (Refer to Water System Map located on page 111 of the Seismic Safety Element Technical Report 2.) Table 8 gives historical sources of supply and projections to 1985.

Well water was supplied to the city of Santa Monica from 9 wells, according to the monthly well report dated September 30, 1982, representing 31 percent of the city supply in 1981. These wells are located within well fields known as Santa Monica (within city limits), Arcadia (east of the city) and Charnock (south of the city). The predominant source is the Charnock Well Field. Both the Charnock and Arcadia wells seem to be at capacity. The city is projecting increases in well water supply in Table 9 from the Santa Monica well fields. The city is in the early stage of retaining a consultant to analyze the potential of obtaining additional water from the Santa Monica well field to meet well projections. If the city is successful in its well development program as projected, it will rely less on MWD water than current consumption, at least through the projection period of 1985. The city has not projected beyond 1985.

MWD supplied 69 percent of the city's water in 1981. MWD wholesales water to the city under the provisions of the Metropolitan Water District Act. The city of Santa Monica is a member agency of MWD and is entitled to a preferential request to purchase water at specified rates and quantity, under Section 135 of the aforementioned act.

MWD serves the city of Santa Monica from the Santa Monica #1 and #2 Feeders. SM#1 and #2 have the capacity of 30 cfs (cubic feet per second, with one cubic foot of water equaling 7.48 gallons), or 16 MGD (Million Gallons per Day), and 70 cfs (45 MGD) respectively; however, using the SM#2 feeder interferes with the Charnock Well supply to Arcadia. Hence, any flow above 30 cfs (16 MGD) would require an additional MWD line. It should be stated that the SM#1 feeder has twice the capacity of the current supply. Therefore, there is far more excess service capacity than that needed to accommodate forecast growth.

MWD projects water facilities to meet the projected water demand of all its member agencies for the year 2000, provided demand does not exceed low demand curves. Demand exceeding low demand projections would require completion of the State Water Project by the state of California. Demand is unlikely to exceed the low demand curves, because the price of water is expected to increase substantially in the future (probably 200 percent by the end of the decade), and elasticity of demand implies that as prices go up, customers would have a strong incentive to conserve water.

Table 8 - Historical Sources of Water Supply and Projections to 1985

Year Calendar	MWD Purchased MG/Year	Percent MWD	Well Production MG/Year	Percent Well	Total Production MG/Year
1975	3,096	56	2,397	44	5,493
1976	3,297	59	2,328	41	5,625
1977	2,516	53	2,243	47	4,759
1978	3,700	73	1,314(1)	27	5,014(2)
1979	3,550	66	1,811	34	5,361
1980	3,742	67	1,834	33	5,576
1981	3,716	69	1,674(3)	31	5,391
1982	3,202	60	2,180	40	5,384
1983(4)	3,476	60	2,274(5)	40	5,750(6)
1984	3,226	56	2,524(5)	44	5,750(6)
1985	2,976	52	2,774(5)	48	5,750(6)

(1) This was a drought year and this was low because the aquifer was recharged with specially priced MWD water.
(2) The overall demand was lower, but the recharge may have required slightly more water and, consequently, the overall increase was the same.
(3) Two wells were shut off because of TCE. Both are now being used.
(4) From this point, all the consumption figures are only estimates.
(5) This is predicted on the assumption that one well will be added to the system each year. At approximately 600 gpm maximum, this would amount to 290 MG/year, but for the purposes of production, an average increase of 250 MG/year will be used to allow for various losses. The initial well will produce more than the subsequent wells.
(6) Historically, the annual increase has been from 250 to 350 MG. However, as indicated in the water consumption decrease from 1981 to 1982, the water conservation measures along with stabilized residential development should result in almost no overall increase in total consumption for the next few years.

These figures must be regarded as very rough estimates that could vary drastically. Many variables, such as City Council approval of projects, funding, population growth, etc., will affect the production to a large extent.

Source: City of Santa Monica Dept. of General Services, Water Division. Hall Goodhue Haisley and Barker

The MWD and other agencies contracted with the state in 1960 to obtain water from the State Water Project. Obviously, if facilities are not built and demand exceeds low projections, there will be shortages in water supplies, with the magnitude of the shortages dependent on a number of factors such as population growth, water use per capita, and weather conditions in Southern California and in areas from which the supplemental water for this area originates (Northern California, the Colorado River Basin, the Owens Valley, and Mono Basin). MWD cannot quantify the amount of water that will be available to Santa Monica during the 1982-2000 planning period, but feels confident it can meet the city's needs.

Water Treatment -- City well water is softened at the city's water-softening plant. This plant is at capacity, and any additional flow would result in harder water. The city is studying various alternatives to increasing the capacity of the softening plant, including salt water regeneration of softening beds and plant expansion.

MWD water is treated at the F. E. Weymouth Memorial Filtration Plant in La Verne, or at the Joseph Jensen Filtration Plant in the San Fernando Valley via interconnections between the Culver City Feeder (SM#2) and Santa Monica Feeder (SM#1) with MWD's 600 cfs (388 MGD) Sepulveda Feeder. The city chlorinates the water at its water treatment plant. Chlorination does not have capacity limits, as it is a chemical supply activity.

Treated Water Storage -- The city has four reservoirs with capacity of 40 MG (Million Gallons). The National Board of Fire Underwriters recommends storage capacity of three days' emergency supply, also often expressed as one maximum day plus fire protection requirements. A three-day emergency supply is 35 MG; hence, there is an excess capacity of 5 MG or 15 percent over current emergency requirements.

In addition, the city owns a site for an additional 15 MG reservoir.

Water Distribution -- The city of Santa Monica has an extensive water distribution system of supply mains from reservoirs and distribution lines which serve three pressure zones. The existing flow and capacity of the major supply mains at each pressure zone are summarized below.

Pressure Zone and (Supply Main)	Existing Flow (MGD)	Total Capacity (MGD)
500' Zone (18" Line)	5.5 MGD	10 MGD
350' Zone (24" and 20")	5.7 MGD	20 MGD
250' Zone (24")	3 MGD	15 MGD

To evaluate the capacity of the existing water distribution system, fire flow tests undertaken on March 4, 1982, by the Insurance Services Office of California as part of its periodic rating of the city were reviewed. All ratings exceeded or approached the 3,500 gpm (gallons per minute) criterion except at hydrants located at Main Street and City Hall, Pennsylvania and 24th Street, and 420 Santa Monica Pier. The line on Main Street has been improved since the ISO report was completed. The line on Pennsylvania and the Pier are 4-inch or 6-inch lines feeding into a larger line and could probably have increased flow if enlarged or, alternatively, buildings may be required to have sprinkler systems. More extensive analysis beyond the above would require preparation of a master water plan.

Pumping Stations -- There are five pumping stations in Santa Monica:

- Charnock Pumping Station has a design capacity of 19.8 million gallons per day (mgd) and lifts water from Charnock Basin to Arcadia Softening Plant.
- An 8.2 mgd Pumping Facility transfers the water from Arcadia Softening Plant to Arcadia Reservoir.
- The Arcadia Pumping Station has a capacity of 17.5 mgd and normally lifts water from Arcadia Reservoir to the 350-foot zone, but it also has the capacity to serve the 500-foot zone.
- The San Vicente Pumping Station operates on a standby basis to serve the 500-foot zone.
- The Mount Olivette Pumping Station operates on an emergency basis to serve the 500-foot zone.

All pumping stations are electric-powered except for two emergency units at the Mount Olivette Reservoir which are driven by gasoline fueled engines, and a standby diesel-powered unit at the San Vicente Pumping Station.

5.18 SEWER

Service Provider -- The city maintains a sewage collection system and pump stations that convey effluent from the city and from Malibu and portions of West Los Angeles under a joint powers agreement with the city of Los Angeles. Also under joint powers agreement with the city of Los Angeles, the city of Los Angeles conveys and treats the city of Santa Monica's effluents.

Existing City Collection Facilities -- Refer to the Sewer System map located in the Seismic Safety Element Technical Report 2 (page 112) for a description of existing major sewer lines and pump station locations.

Table 9 summarizes the existing use, capacity, and excess capacity of the major sewer trunklines. This analysis is based on flow measurements taken by city staff at approximate peak flow hours of 9:00 to 11:00 a.m. on November 3 and 4, 1982.

Table 9 - Sewer Interceptor Trunkline Excess Capacity by Zone

		Limiting Excess Capacity by Zone	
		(cfs)*	MGD**
Zone A/B/C	(North of Broadway)	12.39	8.0
Zone D/E	(Broadway to Freeway)	12.00	7.8
Zone F	(Pico to Freeway)	.87	.6
Zone G	(Ocean Avenue)	11.65	7.5
Zone H	(Palisades Beach)	18.13	11.8
Zone I/J	(Airport and Business Park)	0.00	0.0
Zone K	(Sunset Park)	2.57	1.6
Zone L	(Lincoln)	.40	.3

* cfs = cubic foot per second
** cfs x .646317 = MGD (million gallons per day)
Source: City of Santa Monica
Hall Goodhue Haisley and Barker

Existing and Planned City of Los Angeles Collection and Treatment Facilities -- Sewage generated by the city of Santa Monica is treated by the city of Los Angeles under a joint powers agreement. Sewage is transported by trunk sewers between the southern boundary of the city of Santa Monica and Hyperion Treatment Plant. Because of gradients, sewage is lifted at the Venice Pump Station to gravity flow to Hyperion. The trunk sewer between Hyperion and the Venice treatment plant has capacity for twice the current sewage flows the city currently generates (11 MGD). The trunk sewer between the city boundary and the Venice Pump Station has about 30 cfs unused capacity, of which the city already owns the use of cfs average flow or 1.9 MGD.

The Venice pumping plant has capacity for Santa Monica's existing owned capacity of 35.2 cfs (peak), of which Santa Monica is using approximately 32 cfs. Thus, Santa Monica already owns the right to an additional flow which equates to about 1.2 MGD of average flow.

The existing Hyperion Treatment Plant has the design capacity of 420 million gallons per day (MGD), of which the city of Santa Monica owns 11 MGD of capacity or 11/420ths of the plant. Recent flows for the years 1975 to 1981 (estimate) are summarized in the table below.

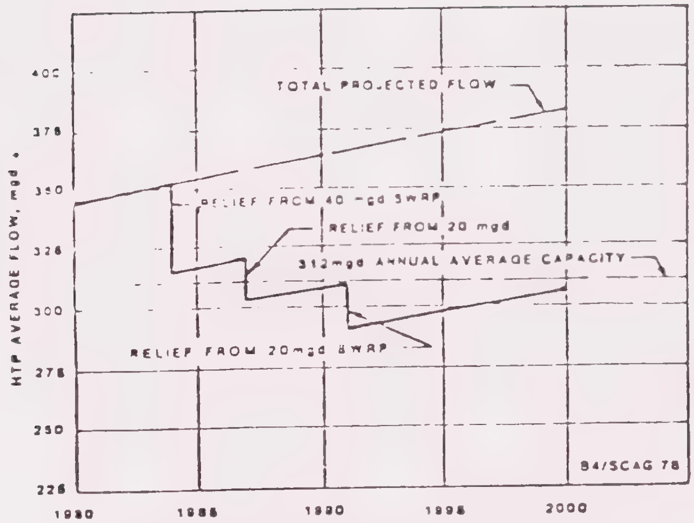
Table 10 - Santa Monica Sewage Flows to Los Angeles Treatment Facilities

Year	Flow (MGD)
1975-76	11.0
1976-77	11.0
1977-78	10.4
1978-79	11.1
1979-80	10.4
1980-81	11.1

Source: City of Santa Monica

As is evident from Table 10, Santa Monica has exceeded its contracted ownership capacity twice in the last six years. (Pursuant to an agreement between the city of Los Angeles and the city of Santa Monica, Santa Monica can purchase excess sewage capacity for a nominal charge.) The reason sewage flow is so constant, in view of recent growth, is that some of the large industrial water users have left Santa Monica. Also, there has been some increased conservation as a result of the recent drought.

The Los Angeles City Council has adopted and is currently implementing a Wastewater Facilities Plan. The plan provides for the future of the sewage system through the year 2000, required by the State Water Resources Control Board (SWRCB) and the U.S. Environmental Protection Agency (EPA), as a grant funding requisite. The plan establishes a new basic policy whereby modular treatment capacity will be added in increments at the upstream plants in four- to eight-year periods. Figure 19, excerpted from the plan, delineates the planned additions. The size and timing of these additions is based on the Southern California Association of Governments (SCAG) 82A growth forecasts.



FLOW PROJECTIONS TO NOS-LCSFVRS TUNNEL & HTP

Source: City of Los Angeles

Figure 19: Los Angeles Wastewater Facility Plan Expansion

As part of the Wastewater Facilities Plan, the Hyperion Treatment Plant (HTP) is being redesigned to a reduced capacity of 312 MGD. The required capacity will be regained through construction of the D. C. Tillman (formerly Sepulveda) Water Reclamation Plan (TWRP), with a capacity of 40 MGD. Capacity for future growth will be provided through construction of additional modules at TWRP and at the city of Los Angeles' Glendale Water Reclamation Plant (LAGWRP). Construction of upstream plants will free capacity at HTP for downstream users, including Santa Monica. Sewage disposal will be provided by the Hyperion Energy Recovery System (HERS). HERS will have expansion capacity. Until the new HTP and TWPP are operational, projected in 1988, Santa Monica will be allowed to exceed permitted flow to HTP, as authorized under the existing contract.

When the official capacity of HTP is reduced in 1987, Santa Monica's contracted flow of 11/420ths of average flow capacity (or 2.6 percent of 420 MGD) will decrease to 8.17 MGD, or 2.6 percent of 312 MGD. The city of Los Angeles has proposed to the city of Santa Monica that it can repurchase lost capacity, including sludge disposal, at the same rate the city of Los Angeles is paying to restore its own capacity by construction of TWRP, which includes state and federal grant credits.

Capacity beyond 11 MGD will be provided by modules at TWRP, HERS, and LAGWRP, which will not have the benefit of federal grant funding assistance. The second module at TWRP is planned for construction in fund year 1985-87.

5.19 STORM DRAINAGE AND WATER QUALITY

Existing Facilities -- The Storm Drainage System map, located in the Seismic Safety Element Technical Report 2 (page 121), indicates the location of the major storm drains serving or crossing the city. The Kenter Canyon Drain is the largest storm drain line within the city limits and consists of a 9- to 10-foot concrete arch pipe. It empties to the ocean at the foot of Pico Boulevard. Other drains shown on the map are local drains primarily collecting drainage from city streets.

Santa Monica is in conformance with the current Water Quality Control Plan for the Los Angeles Region.

5.20 POWER

Service Provider -- Southern California Edison Company

Existing Facilities -- At the end of 1979, Edison had an installed, company-owned generating capacity of 13,263 megawatts. Seventy-nine percent of this capacity is composed of oil- and gas-fired generators; coal accounts for another 12 percent of capacity; and hydroelectric and nuclear make up 6 percent and 3 percent, respectively. In addition, Edison had 1,670 megawatts of capacity under contract from other utilities at the end of 1979 (SCE 1979 Annual Report).

Power from generated plants is transmitted to five substations. From the substations, power is distributed to individual users through a system of overhead and underground lines. For location of substations and transmission, 220 kilovolts (KV) or greater, and distribution facilities, see maps in Seismic Safety Element Technical Report 2, page 114. The city is currently constructing a 100-KV hydroelectric generation station at Wilshire and Bundy. The city is considering constructing a solid waste to energy conversion plant within the next ten years in order to decrease demand on SCE power.

5.21 TELEPHONE

Service Provider -- General Telephone

Existing Facilities -- GTE operates two central switching stations and an extensive system of underground trunk and overhead service lines in Santa Monica. For location, see map on page 114 in the Seismic Safety Element Technical Report 2.

5.22 GAS

Service Provider -- Southern California Gas Company

Existing Facilities -- Gas transmission mains in excess of six inches in diameter are mapped on page 116 of the Seismic Safety Element Technical Report 2. No gas storage facilities exist within the city. In order to reduce gas consumption, the city is constructing a solar pool heater at Santa Monica College and Municipal Pool.

6.0 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

6.1 CLIMATE

Urban design policies in the Draft Land Use Element include provisions for sunlight access and wind deceleration. These provisions require building stepbacks on the south side of blocks to provide sunlight to the street and building stepbacks in the windward direction to reduce wind acceleration.

6.2 GEOLOGY

Disruptions, displacements, compaction, or overcovering of the soil -- Santa Monica is a built-up city, from a geotechnical standpoint. Santa Monica's topography in areas suitable for projected growth is essentially flat or gentle. Surficial soils are suitable for development. New development would require very little disruption or displacement of existing soil, except for excavation of subsurface garages. Hence, the plan will not result in a significant geologic impact.

Exposure of people or property to geologic hazards or water-related hazards -- These hazards are discussed under Existing Setting. The Draft Plan is consistent with the policies of the Seismic and General Safety Elements. Since the proposed plan and the city's requirement that all new construction conform to the seismic design criteria of the 1982 edition of the Uniform Building Code, it is concluded that all new employees and residents of new construction will not be exposed to unreasonable risk in the event of a geologic event.

6.3 ARCHAEOLOGY AND HISTORY

The Draft Land Use Plan will have no direct impact on the existing known potential archaeological site.

Policies in the Draft Plan will have a beneficial effect on city landmarks, as well as other historic structures, as the plan calls for the conservation and rehabilitation of significant historic buildings or elements of buildings, such as facades along the Mall.

6.4 POPULATION, EMPLOYMENT, AND HOUSING

Forecasts -- Santa Monica had 88,314 residents and 54,782 jobs in 1980. In the year 2000 it is estimated that the city will contain 92,889 residents and 84,424 jobs (see Tables 11 and 12).

Table 11 - Population and Housing Forecast to Year 2000

Year	Total Population	Number of Households	Population Per Household
1980	88,314*	43,912	1.98
1982	88,773	44,086	1.98
2000	92,889**	45,652	2.00
Increase 1982 to 2000	4,116	979	.02
Percent Increase	4.6	2.2	1.00

* Source: 1980 U.S. Census.
** Source: SCAG Revised Growth Forecast - 82C.
Hamilton, Rabinovitz and Szanton

Table 12 - Employment Forecast to Year 2000

1982	2000	Change	Percent Change
54,782	84,424	29,642	54

Source: Hamilton, Rabinovitz and Szanton

The Draft Land Use Element proposes to allow residential land use in all districts, except in the Airport and with limitations in the Industrial District. In particular, the Draft Element requires residential development in the Broadway corridor by establishment of a mandatory mixed-use, residential service commercial zone. The major impediment to housing production is the high cost of land and construction. The Housing Element of the General Plan outlines housing production strategies.

Relationship between City and Regional Forecasts --

Population -- Table 13 provides a comparison of population forecasts provided by SCAG as of May, 1983, and those included in the Draft Land Use Element. RSA 16 refers to a Regional Statistical Area generally including parts of West Los Angeles, the Marina, Venice, Brentwood, and Pacific Palisades. The major difference between the Element forecast and SCAG 83 is that SCAG estimates population growth to be 3,000 persons higher than Element forecasts.

Table 13 - Population Forecasts after May, 1983

	1980	2000	Change	% Change
RSA 16 (SCAG 83)	305,000	329,000	24,000	7.9
SCAG 83	88,314	95,984	7,670	8.7
Element	88,314	92,888	4,574	5.2

Source: Hamilton, Rabinovitz and Szanton

In preparing the draft scenarios for the Land Use Element, the consultants adopted the SCAG 82C forecast. This forecast assumes that 22.6 percent of the growth forecast for RSA 16, of which Santa Monica is a part, would be captured by the city. This relatively low capture rate was suggested by the fact that the Summa Corporation Ballona Wetlands Development is anticipated to attract 20,000 new residents when completed and there was indication that the residential component of the development would move ahead reasonably steadily.

Employment -- A comparison of employment forecasts as of July, 1983, is provided in Table 14.

Table 14 - Employment Forecasts after July, 1983

	1980	1982	2000	Change	% Change
RSA 16 (83)	156,000		181,000	25,000	16.0
SCAG (83)	66,225		77,375	11,150	16.8
Element		54,782	82,752	27,970	51.1

Source: Hamilton, Rabinovitz and Szanton

The difference arises from a difference in data sources and methodology. SCAG 83 estimates are derived from a question in the 1980 Census which asks individual households throughout the region where members of those households work. The RSA forecasts are official in the sense that they have been adopted by SCAG. The city-level forecasts are not official and have been circulated for comment only.

The Element team estimates are derived from 1972-77 I.C.E. data, augmented by data for the same period from the U.S. Census of Manufacturers, and data in the 1982-83 Annual Planning Information report on the Los Angeles-Long Beach SMSA issued by the State Employment Development Department. These data are less comprehensive than the Census data, since they tend to exclude individuals who work at home or are self employed. Such employees are not picked up by the I.C.E. methodology, because it surveys business entitities and not individuals in their homes. However, since the principal use of the employment data is to project demand for space, this less comprehensive data set is actually more useful.

The Element team methodology also differs from that used by SCAG. In general, the SCAG forecast is based on disaggregation of a regional model. The Element team methodology also is driven by what happened to regional employment between 1973 and 1981, but Santa Monica's shares of different types of employment are specifically accounted for. The methodology is described in detail in City of Santa Monica, Baseline Demographic and Economic Projections: 1982-2000.

Despite the seemingly large differences, the end result of the different methodologies and data bases does not produce results which are very far apart. The Element team is forecasting that in the year 2000 there will be 5,377 more jobs (6.9 percent) than SCAG forecasts. Given the uncertainties, this does not seem an unreasonable range. Note also that this Element employment estimate is well within the employment estimate by SCAG for the RSA in the year 2000.

Labor Force-Population Balance -- In 1980 there were 88,314 persons in the city, as indicated above, and 40,949 of them were in the labor force. This means that about 46 percent of the population of the city was in the labor force. Under the proposed Land Use Element, in the year 2000 it is estimated that the city will contain 92,889 residents, and 53,875 of those residents will be in the labor force. This means that about 58 percent of the population of the city will be in the labor force. In 1980 there were 54,782 jobs in the city, and in the year 2000 there will be 84,424 jobs, as discussed above. Therefore, in the year 2000 there will be approximately 30,000 more jobs than city workforce.

In the Regional Statistical Area (RSA) 16, SCAG has projected a population of 329,000 and employment of 181,000. The labor force of the population in the year 2000 is estimated at 191,000, or 58 percent. Based on this analysis, the population and labor force are generally in balance, i.e., 191,000 labor force and 181,000 employment estimate.

Impact on Unemployment and Underemployment

One of the city's initial goals with respect to the Draft Land Use Element is that the element give attention to problems of unemployment and underemployment.

It is estimated that in the year 2000 the city population would include 2,453 unemployed persons, if current unemployment rates continue. This implies an unemployment rate of 4.4 percent. (The methodology for calculating unemployment is contained in HRS' City of Santa Monica Demographic and Economic Projections, 1980-2000.) The unemployment figures by racial and sex group are shown below.

Table 15 - Unemployment Forecast to Year 2000

	Number	Percent of Year 2000 Labor Force
Unemployed Males	1,314	4.5%
Unemployed Females	1,139	4.2
Total	2,453	
White Unemployed	1,793	4.2
Nonwhite Unemployed	660	4.9
Total	2,453	

Source: Hamilton, Rabinovitz and Szanton

The scale of the underemployment problem is greater. It is estimated that the city would contain 7,300 underemployed persons in the year 2000, or 8.3 percent of the population, if current "underemployment" rates continued. (The methodology for estimating underemployment is contained in HRS' City of Santa Monica Demographic and Economic Projections, 1980-2000.)

Draft Land Use Element policies imply a 54 percent increase in total employment in the city, or the addition of 30,000 new jobs by the year 2000. Of these new jobs, about 8,600 are likely to be held by Santa Monica residents, if the ratios of local residential job holding to type of employment continue to the year 2000. The projected distribution of these jobs by area of the city is shown below.

Table 16 - Growth in Santa Monica Workforce to Year 2000

Sector	New Jobs for Santa Monica Residents
Industrial Corridor	2,100
Neighborhood Commercial	200
Downtown	3,000
Corridors	2,100
Oceanfront	1,187
Total	8,587

Source: Hamilton, Rabinovitz and Szanton

This scale of new employment is almost sufficient to eliminate the underemployment present in the city today, as well as to make a substantial contribution to decreasing unemployment.

In addition, the Draft Land Use Element contains one major policy which indirectly fosters employment of local residents. Since it appears that more industrial than office jobs are now held by local residents (30 percent as compared with 18 percent), a portion of the Industrial Corridor has been reserved for continued promotion of industrial development, rather than for additional office development, despite the relatively weak regional prospects for extensive industrial growth. This is designed to increase the potential of new development for drawing employees from among the local population.

City residents have expressed concern that among the anticipated total of about 2,400 new jobs in the Oceanfront there will be relatively little employment beyond entry level, since about 2,000 of these jobs are anticipated to be due to new hotel development, and hotel employment is typically bottom-heavy. As indicated in the Oceanfront Issue Paper, a typical 350-room hotel is likely to provide 300 jobs, of which 235 are for service workers and semi-skilled labor, 40 are clerical, and 24 are managerial, professional, and sales. The city, when devising a Specific Plan for the Oceanfront, should consider establishing a policy to insure promotion and training of service workers who are employed in local hotels for clerical, professional, and managerial positions.

6.5 LAND USE

Demand Forecast -- Based on population and employment projections, there will be demand for an additional 3.8 million square feet of office space in the year 2000 (an increase of 59 percent over 1982); for 238,000 square feet of new industrial space (an increase of 7.3 percent over 1982); and for 1.7 million square feet of new retail space (an increase of 31.1 percent over 1982). Overall, this means there will be demand for 5.8 million new square feet of these types of uses by the year 2000 in Santa Monica, an increase of 38 percent (see Table 17.) Hotel space is expected to increase by 2,450 rooms, or 245 percent, by the year 2000, from 983 rooms in 1982. Residential units are 2,232 units, or 4 percent, by the year 2000, from 46,137 in 1982, also by allocation of growth demand by area.

Table 17 - Commercial and Industrial Space Forecast*

	1980	1982	2000	Increase from 1982	Percent of Increase
Office	6,180,000	6,490,000	10,339,000	3,849,000	59.0
Retail	5,323,282	5,484,000	7,189,221	1,705,221	31.1
Industrial	3,245,600	3,272,000	3,509,830	237,830	7.3
Total	14,748,882	15,246,000	21,038,051	5,792,051	38.0

* Detailed discussion of these projections and their sub-components is contained in "City of Santa Monica Baseline Demographic and Economic Projections: 1980-2000," January 1983.

Source: Hamilton, Rabinovitz and Szanton

Supply Forecast -- The amount of land available to accommodate forecast demand has been estimated by a "susceptibility to change" analysis. This method classifies existing development in terms of the likelihood or desirability of its permanence. What is its life expectancy as determined by its physical characteristics? The analytic method is analogous to property appraisal procedures which assume that new, large, modern structures are more resistant to change than old, small, obsolete or structurally unsound buildings.

The following indicators were used to determine relative susceptibility to change:

Assumed permanent:

- Residential uses
- Recent projects
- Historic landmarks
- Long-term public and quasi-public uses
- Existing development with high land utilization as compared with that allowable under zoning regulations
- Existing development with high value of improvements as compared to land value
- Existing value of use exceeds the value to be gained by demolishing and rebuilding

Assumed "soft" (susceptible to change):

- Proposed projects
- The reciprocal of what is assumed permanent existing development with low land utilization ratio (FAR) and/or low value of improvements as compared to land value

Development potential (supply) for commercial districts was analyzed against forecast demand (Table 18), assuming allowable FAR ranges for the plan would be similar to standards recommended in the Land Use Element. In every case, there was at least twice the

amount of development potential as needed to accommodate demand. This 2:1 ratio is an important threshold, because it accounts for the fact that some owners may be unwilling to put their land on the market even though it is judged "susceptible to change" during the planning period; hence, this factor must be accommodated.

Change in Areal Extent of Land Use Classifications -- Proposed land use plan as compared with the 1958 Land Use Element and current zoning map was analyzed; two principal changes have resulted. As a result of the Special Office classification, 279 acres of former industrial land will become commercial uses, i.e., 51 acres of the Santa Monica Business Park and 228 acres of the former Industrial Corridor. The other significant change is the reclassification of public facilities in school, park, cemetery, or civic center use to a new "Public" category, from their previous "R" and "C" categories.

Change in Intensity and Density of Use -- In general, density and intensity of use have been reduced from previous plans and zoning in all districts of the city, consistent with Draft Plan goals, policies, and principles.

The Draft Plan proposes only limited changes in land use classification boundaries from past plan and zoning, with the exception of the change of Special Office Districts from Industrial. Most of its recommendations are more subtle refinements in allowable use, form, and character of development, as described in the Draft Plan.

The major cumulative effect on land use resulting from the Draft Plan will be a continuing increase in average intensity of non-residential uses. This will occur particularly in those areas targeted for growth concentration -- Downtown, the Industrial Corridor, and the Wilshire/Santa Monica Corridor. Another important indirect effect will be a gradual change in the character of commercial corridors: a growing concentration of neighborhood commercial uses on Pico and Broadway between Downtown and 20th Street, and gradual infill of vacant and extremely low intensity parcels in all areas. Given the extent of the commercial area in the city, this effect will not result in a significant adverse impact.

Table 18:
Practical Maximum Development Potential Compared to Forecast Demand

	Acres Susceptible to Change	Practical Maximum FAR	Development Potential (S.F.)	Demand Forecast (S.F.)	Demand as a % of Development Potential *
Downtown					
Ocean to 2nd	6.37	2.50	694,000		
2nd to 4th	16.01	3.30	2,301,500		
Remainder	59.25	3.00	7,743,000	2,254,877	
				300,000 hotel	
Total			10,738,500	2,554,877	23.79
Wilshire/SM East	51.40	2.00	4,478,000		
Santa Monica West	17.00	1.00	740,500		
Total			5,218,500	1,098,000	21.04
Broadway Mixed-Use District	4.80	1.00	210,000	105,000	50.00
Pico	5.70	1.50	372,000	141,000	37.90
Lincoln South of Freeway	.86	1.00	37,500		
Special Office District	37.74	2.00	4,229,000	1,751,400	
				250,000 hotel	
			4,229,000	2,001,400	47.33
Industrial District	14.12	1.00	615,000	238,000	38.70
Sunset Park and Ocean Park Blvd.	2.40	1.50	157,000	50,000	31.85
Ocean Park and Main Street	3.70	2.00	322,000	26,000	8.07
Oceanfront					
Zones 1, 2, 4 (incl. Rand)	18.40	3.00	2,404,500	50,000	
Zone 3	2.50	1.50	163,000	1,200,000 hotel	
Total			2,567,500	1,250,000	48.69
Montana and North	2.40	1.50	157,000	20,500	13.06
GRAND TOTAL	242.65				

Note: Excludes Airport Lands
Source: Hall Goodhue Haisley and Barker

6.6 VISUAL

The urban design policies in the Draft Land Use Plan will have a beneficial effect on the visual environment. Specific policies are directed to preserving the visual assets of the city and ameliorating the visual liabilities described in the Setting section.

Building intensity policies are directed to maintain the low scale of Santa Monica as perceived from Scenic Routes and at the pedestrian scale. A number of policies are directed to streetscape improvements which, if implemented, will result in visual enhancement of the Scenic Corridor and major highway commercial streets, especially Lincoln Boulevard.

Draft Plan policies for color and materials should obviate problems of glare.

Landscape and open space policies address reduction of surface parking lots on or near the beach and landscape requirements for those remaining. Building and streetscape lighting policies should result in an improved nighttime lightscape.

6.7 TRAFFIC

Regional and local plan policies are expected to result in increased transit ridership and vehicle occupancy rates over existing levels. As a result, the number of trips generated by existing land uses in Santa Monica is expected to decrease, and the number of trips generated by new land uses is expected to be lower than it otherwise would have been. The new development projected to occur in Santa Monica through the year 2000 will generate close to 125,000 new daily vehicle trips. When combined with the decreased trip generation of existing land uses, these new trips will result in a net increase in vehicle trips generated in the city in the year 2000 of about 27,770, an increase of 5 percent over the 525,000 vehicle trips currently generated in the city.

The increased transit usage and auto occupancies assumed in this analysis are consistent with the assumptions made by SCAG in preparing the Regional Transportation Plan (RTP) for the year 2000. The RTP establishes the following long-range objectives for the year 2000 and identifies the specific projects (action elements) deemed necessary to achieve those goals:

- Increase transit ridership from 3 percent to 6 percent of all person-trips, with a 30 percent transit objective in the Santa Monica-Los Angeles CBD corridor.

- Increase ridesharing from 1.2 persons per vehicle to 1.4.

o Replace 12 percent of all work trips through the use of telecommunications.

The analysis in the EIR of the future transportation demands in Santa Monica was conducted utilizing trip generation rates consistent with, although somewhat more conservative than, those implied by the RTP objectives. The year 2000 trip generation of land uses in Santa Monica was based on the assumption that the Plan would result in an increase in transit mode split from the existing 4.9 percent to 9.0 percent and that vehicle occupancies would increase from 1.2 to 1.4 persons per vehicle. No reduction in trip making was attributed to telecommunications. The combined effect of these actions is projected to be an 18 percent reduction in vehicular trip making from existing patterns.

Table 19 provides a breakdown of the existing and year 2000 land uses and their associated trip generation in each functional area of the city. The areas of the city where the largest increases in trip generation will occur are the Downtown, the Oceanfront, the Industrial Corridor, and the Wilshire/Santa Monica Corridor. The trips generated in these four areas will represent close to 80 percent of the new trips generated in the city. In several areas of the city, the number of vehicle trips generated is projected to decrease in the future as Santa Monicans shift to alternate modes of transportation from the single-occupant automobile.

The types of Transportation System Management (TSM) actions which have been included in the Plan and the typical percentage reductions in peak hour work trips that they have produced in other locations include the following:

TSM Action	Potential Reduction in Peak Hour Trips
Change work hours	- 4.0%
Increase % living & working on site	-20.0%
Improve bus routes & schedules	- 8.0%
Hire ride share coordinator	- 8.0%
Sponsor vanpools	-12.0%
Subsidize carpools	- 2.0%
Build HOV ramps	- 0.5%
Provide preferential parking	- 0.5%
Reduce parking costs for HOVs	- 2.0%
Restrict parking	- 4.0%
Provide bicycle routes	- 0.5%

The cumulative effects of implementation of all of these types of TSM measures cannot be determined by simply summing their individual trip reducing potentials. The implementation of aggressive TSM programs at several recent large-scale developments in Southern California has been projected to decrease peak hour work trips by up to 20 percent over what would otherwise have been

generated. It appears reasonable, given Santa Monica's existing higher than average transit mode split, to assume that by the year 2000 vehicular trip generation in Santa Monica could be reduced by 18 percent over existing patterns.

Figure 20 illustrates schematically how these new trips will be distributed. Approximately 67 percent of the new vehicle trips generated by the land uses in Santa Monica will have origins or destinations outside of Santa Monica. Many of these will be made by persons commuting into Santa Monica for employment, but an even larger percentage will be made by retail customers or hotel guests in the city. As previously discussed, even though the number of persons commuting into and out of the city can be expected to increase significantly as a result of the large number of new jobs and shopping opportunities created in the city, the number of vehicles entering and exiting the city will not increase as dramatically, because of the increased transit ridership and vehicle occupancy which are projected to occur as a result of Plan policies.

In addition to the trips generated by planned land uses within Santa Monica, some additional through traffic will also be added to the city's streets as a result of growth and development in the areas surrounding Santa Monica. In order to account for the cumulative impacts of the growth in adjacent areas, background traffic volumes on the major through streets in the city were expanded by 0.5 percent per year through 2000.

When the trips generated by new developments in and around Santa Monica are distributed throughout the city, the projected average existing daily traffic volumes shown on Figures 21 and 22 result. Locations where ADTs are projected to exceed 75 percent of the daily capacity of the street and where peak hour congestion problems could be anticipated in the year 2000 are indicated with a circle on the figures, if Draft Plan policies to improve these facilities are not implemented.

- Lincoln Boulevard, south of Santa Monica
- The Cloverfield Interchange
- Wilshire Boulevard, east of Downtown
- 23rd Street, south of Ocean Park Boulevard

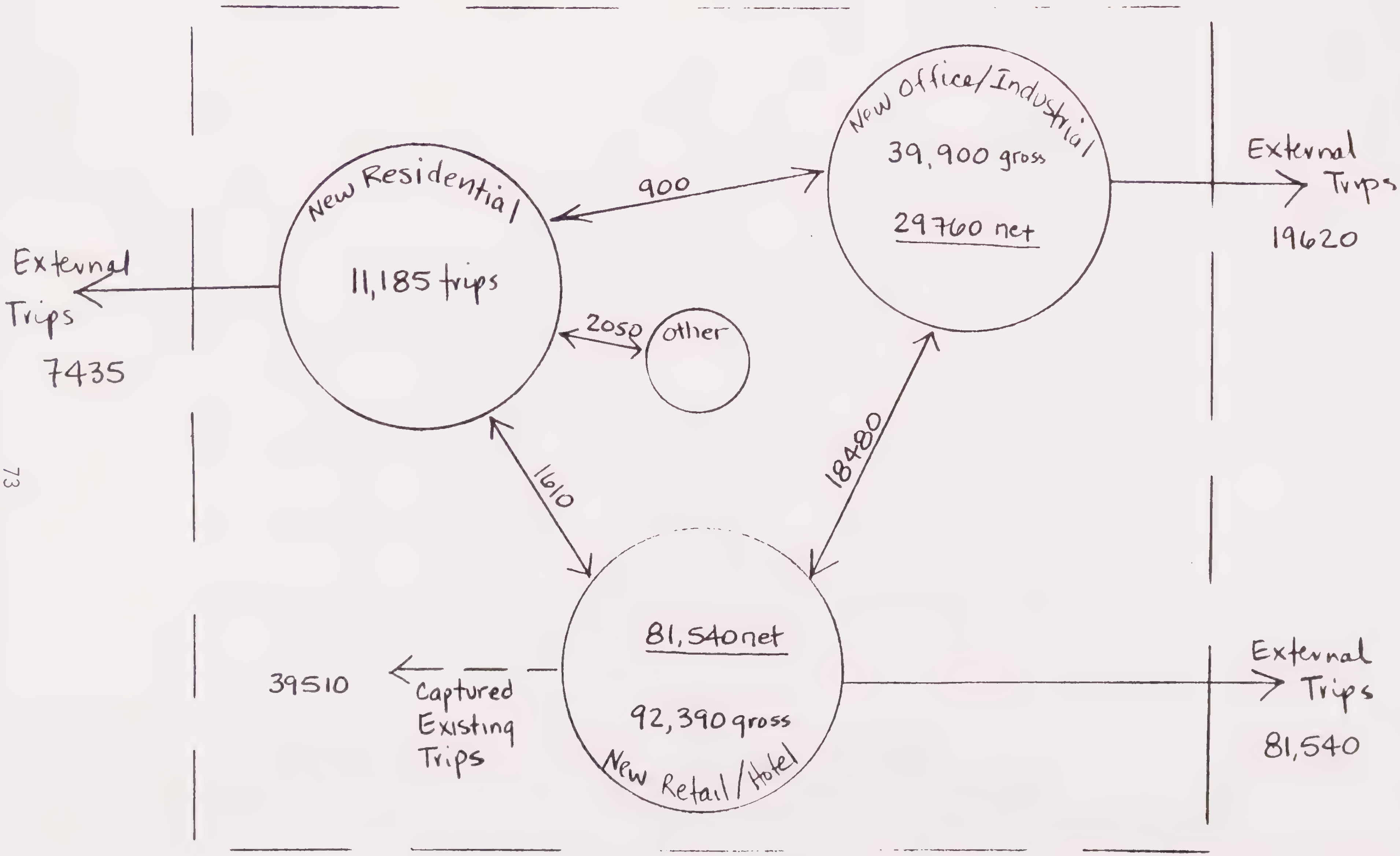
All of these locations are major access routes into the city from adjacent areas of the city of Los Angeles or the regional highway network. At two of the locations (Cloverfield Interchange and Lincoln Boulevard), the projected volumes exceed 100 percent of the existing capacity of the system. Capacity improvements to both these facilities have been included in the Draft Plan as specific policies, to avoid lengthy periods of congestion and/or diversions to alternate routes through residential neighborhoods.

Table 19:

Trip Generation by Functional Area, 1982 and Year 2000

Functional Area	Land/Use	1982 Existing: Square Footage	1982 Existing: Daily Trips Generated	Yr. 2000 - Proposed Plan: Square Footage	Yr. 2000 - Proposed Plan: Daily Trips Generated
Downtown	Office	2,337,383	28,750	3,454,262	34,840
	Retail	1,874,000	62,600	2,798,259	77,480
	Residential	1231 DUs	7,510	1420 DUs	7,100
	TOTAL (% incr)		98,860		119,420 (+21%)
Industrial Corridor	Industrial	3,231,600	17,550	3,469,430	15,450
	Office	983,000	12,090	2,734,419	27,580
	Retail	461,000	21,940	518,978	21,750
	Hotel			400 Rms	3,450
	Residential			30 DUs	150
	TOTAL (% incr)		51,580		68,380 (+33%)
Wilshire/ Santa Monica Corridor	Office	1,101,000	13,540	1,801,567	18,170
	Retail	1,416,000	37,670	1,813,316	44,050
	Residential	5677 DUs	34,630	6034 DUs	30,200
	TOTAL (% incr)		85,840		92,420 (+8%)
Lincoln Corridor	Office	171,100	2,100	286,570	2,890
	Retail	567,000	19,560	665,399	22,420
	TOTAL (% incr)		21,310		25,310 (+17%)
Broadway	Industrial	40,000	220	40,000	180
	Office	115,000	1,410	164,350	1660
	Retail	57,000	4,510	112,650	7,310
	Residential	1506 DUs	9,190	1595 DUs	7980
	TOTAL (% incr)		15,330		17,130 (+12%)
Pico	Office	107,000	1320	222,478	2,250
	Retail	380,000	15,350	405,578	15,020
	Residential	4271 DUs	26,050	4,472 DUs	22,370
	TOTAL (% incr)		42,720		39,640 (-7%)
Sunset Park	Office	1,381,586	16,990	1,381,586	13,930
	Retail	115,200	6,960	165,200	8,960
	Residential	6732 DUs	41,060	7,045 DUs	35,240
	TOTAL (% incr)		65,010		58,130 (-10%)
Ocean Park	Office	33,000	400	33,000	330
	Retail	363,000	14,670	388,578	14,460
	Residential	7061 DUs	43,070	7,508 DUs	37,560
	TOTAL (% incr)		58,140		52,350 (-10%)
North of Montana	Office	65,000	800	65,000	660
	Retail	220,000	10,980	240,473	10,950
	Residential	5,298 DUs	32,320	5,310 DUs	26,560
	TOTAL (% incr)		44,100		38,170 (-13%)
Douglas Park	Residential	1,400 DUs	8,540	1,462 DUs	7,320
	TOTAL (% incr)		8,540		7,320 (-14%)
Oceanfront	Office	196,000	2,410	196,000	1,980
	Retail	31,000	3,590	81,000	7,700
	Residential	730 DUs	4,450	734 DUs	3670
	Hotel	983 Rms*	10,320	3,433 Rms*	29,560
	TOTAL (% incr)		20,770		42,910 (+107%)
Wilshire to Montana	Residential	12,231 DUs	74,610	12,763 DUs	63,840
	TOTAL (% incr)		74,610		63,840 (-14%)
Total Gross Trip Generation	Industrial	3,271,600	17,760	3,509,430	15,630
	Office	6,489,969	79,830	10,339,240	104,330
	Retail	5,484,000	197,830	7,139,231	230,080
	Residential	46,137 DUs	281,440	48,373 DUs	241,970
	Hotel	983 Rms	10,320	3,833 Rms	33,010
	TOTAL (% incr)		587,180		625,020 (+6%)
TOTAL NET TRIP GENERATION (Discounting for double counting)			524,850		552,620 (+5%)

Source: PRC Voorhees



total External Trips: 108,595 (67%)
Total Internal Trips: 53,400 (33%)
(incl. Captured Trips)

Figure 20:
Forecast Vehicular Trip Distribution

Figure 21:
Year 2000 Citywide Traffic Forecast

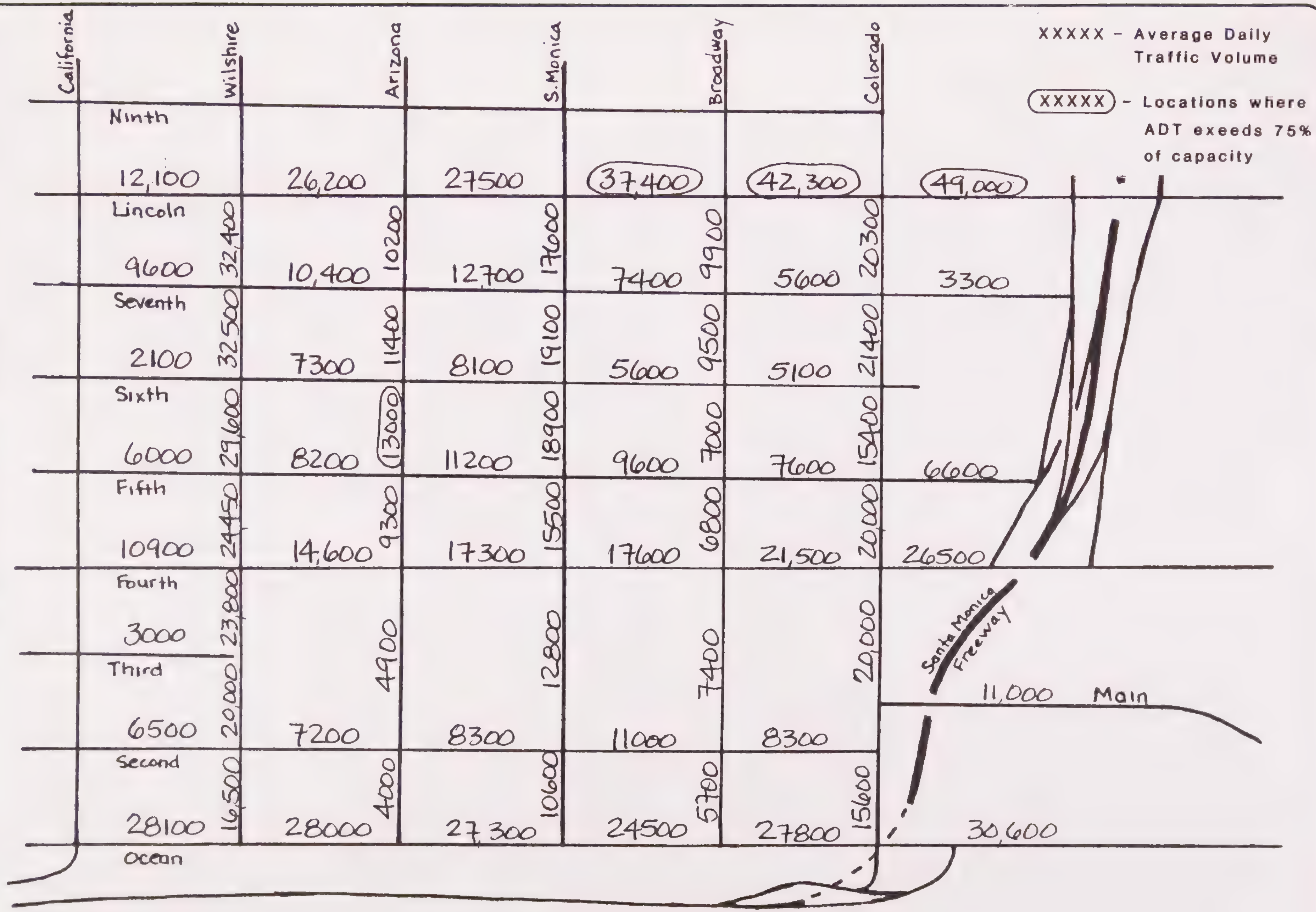


Figure 22:
Year 2000 Downtown Traffic Forecast

PRC Voorhees

It would be necessary for approximately 8,000 vehicles per day to shift from Lincoln Boulevard south of Santa Monica Boulevard to alternate routes, in order to return Lincoln Boulevard to below 100 percent capacity utilization. This indicates that in order to accommodate the future demand for north-south travel on the existing Lincoln Boulevard, an additional two travel lanes would be required during peak hours, or about 8,000 vehicles per day would have to divert to 11th Street, 4th Street, Main Street, or Neilsen Way. The simplest way to obtain the additional capacity in the required Lincoln Corridor, as recommended in the Draft Plan, would be to prohibit parking along Lincoln Boulevard during peak hours, in order to obtain an additional travel lane in each direction.

Approximately 2,000 vehicles per day would have to be diverted away from the Cloverfield Interchange in order to return the existing interchange ramp to below 100 percent capacity utilization and reduce congestion. It is not likely that many of these vehicles could be diverted to the Centinela or Bundy Interchanges because of the strategic location of the Cloverfield Interchange and its convenient access to a large portion of the city of Santa Monica. The Draft Plan recommends that the capacity of the Cloverfield Interchange be upgraded to accommodate the forecast traffic demands by widening the ramps to two-lane on- and off-ramps. Alternatively, new ramps could be added to the 20th Street Interchange to accommodate movements to and from the east on the Santa Monica Freeway.

Construction of the additional ramps at 20th Street would result in diversion of approximately 11,000 vehicles per day away from the Cloverfield Interchange. The resulting volumes on 20th Street and Cloverfield, north of the freeway, would be about 23,000 and 30,000, respectively. This improvement would be inconsistent with the recommended designation of 20th Street as a collector street. If 20th Street were reclassified as an arterial, it could accommodate additional traffic that would be attracted to it without any capacity problems or inconsistencies with the Circulation Plan.

For Wilshire Boulevard, east of Downtown and 23rd Street, south of Ocean Park Boulevard, the forecast volumes will exceed the design volumes included as Draft Plan policy, but the volumes will not exceed the physical carrying capacity of the roadways (see Traffic Appendix). Increased periods of congestion during peak hours can be expected along both of these roadways.

The volume on Wilshire Boulevard at the eastern end of the city is projected to increase to close to 41,000 vehicles per day, approximately the same level as the existing volume on Wilshire near Bundy. It is not anticipated that the increased volumes on Wilshire will result in a significant negative impact that would require the implementation of mitigation measures on Wilshire Boulevard itself.

The 17,000 vehicles per day forecast for 23rd Street, south of Ocean Park Boulevard, will result in a moderate adverse impact to residents along 23rd Street. There is no nearby alternate route for travel to and from the south, so it is unlikely that traffic will divert away from 23rd Street even if it becomes congested. The Draft Plan includes two alternate mitigation measures designed to decrease congestion on 23rd Street. The first alternative would be to prohibit parking on one side of the street so that it could be restriped with a left-turn median lane. This would increase the capacity of 23rd Street and reduce congestion caused by vehicles waiting to turn left onto side streets. Alternatively, 28th Street could be extended along the edge of the Airport to tie into 23rd Street, near Marine Street. This would provide an alternate route for traffic traveling between the Santa Monica Airport Business Park and points to the south of the city. This alternative could, however, also result in the shifting of some traffic from 23rd Street and Cloverfield Boulevard to Stewart and 28th Streets, which would shift the moderate adverse impact from 23rd Street to the residential portion of 28th Street, between Pico and Ocean Park Boulevards.

One other location where future volumes are forecast to exceed the design volume included as Draft Plan policy and where a diversion of traffic to alternate parallel residential streets is possible, is 26th Street, north of Wilshire Boulevard. A potential mitigation measure which would be considered to avoid this diversion would be to reinstate the four-lane striping on 26th Street which was recently removed by the city. The Draft Plan suggests instead that neighborhood traffic control plans be developed for residential areas adjacent to arterials or collectors like 26th Street in order to discourage intrusion of traffic onto residential streets. Three types of measures have been incorporated into the Draft Plan to discourage the diversion of traffic from arterials and collector streets:

- o Installation of traffic control devices to prevent the diversion of traffic into residential neighborhoods.
- o Promotion of measures that will reduce the demand for travel and resulting congestion along these roadways.
- o Improvements to increase capacity of the roadways or, at least, key intersections to reduce congestion and provide the incentive to seek alternative routes.

The following measures have been included in the Draft Circulation Plan to mitigate the traffic impacts of the Draft Land Use Plan:

1. Upgrade the capacity of Lincoln Boulevard by prohibiting on-street parking, in order to gain a third travel lane in each direction. This measure could be implemented initially during

peak hours only and monitored to determine whether or not it needed to be implemented on a 24-hour basis. It could also be implemented in conjunction with the installation of a landscaped median island, similar to those on Ocean Park or San Vicente Boulevards which limit the number of locations where left-turn movements can be made. The reduction of conflicting turn movements would increase the capacity of Lincoln Boulevard to handle through north-south traffic. The median island would also help to reduce the number of vehicles that might otherwise turn from Lincoln onto residential streets in the Ocean Park neighborhood.

2. Improve the capacity of the Cloverfield Interchange by widening the on- and off-ramps to two lanes. Alternatively, consider adding on- and off-ramps at the 20th Street Interchange to provide access to and from the east on the Santa Monica Freeway.

3. Realign Centinela north of the freeway to increase capacity of the Centinela Interchange and improve Centinela as a major access route into Santa Monica. This will require a plan line on private property.

4. Improve the capacity of 23rd Street, south of Ocean Park Boulevard, by restricting on-street parking, to provide two lanes with left-turn pockets. Alternatively, 28th Street could be extended to 23rd Street along the edge of the Airport property, to provide an alternate route to the use of 23rd Street.

5. Develop and implement neighborhood traffic control plans to reduce the intrusion of through traffic into residential neighborhoods. The approximate priority for implementation of these plans is illustrated in Figure 4. The priorities are based on existing problems in residential neighborhoods and the severity of the congestion forecast for the adjacent arterial or collector street from which the diversion is expected to occur.

<u>Relationship with Regional Plans and Cumulative Traffic Effects</u> -- As illustrated diagrammatically on Figure 21, the new land uses developed in Santa Monica through the year 2000 will add approximately 108,000 new daily vehicle trips to the street network outside of the city of Santa Monica. These will be new vehicle trips with one trip end (either an origin or destination) within the city, but with the other trip end somewhere outside of the city. Approximately 75 percent of these external trips will be generated by the new retail or hotel developments anticipated within Santa Monica.

As previously discussed, it is anticipated that Plan policies will decrease the number of future single-occupant auto trips generated by existing land uses in Santa Monica. This shift to alternate

modes of transportation is estimated to decrease the number of external trips generated by existing land uses by close to 80,000 vehicle trips per day. Thus, in the year 2000, the cumulative impacts of developments in the city of Santa Monica will be the addition of approximately 28,000 vehicles to the roadways in the adjacent areas of the city of Los Angeles or the Santa Monica Freeway. Of these, approximately 8,000 vehicles will be added to the freeway, leaving roughly 20,000 vehicles per day added primarily to the following streets in Los Angeles: Lincoln, Santa Monica, Wilshire, 26th Street, and San Vicente.

The net change in traffic on the Santa Monica Freeway resulting from the Draft Land Use Plan in the year 2000 will be 8,200 average daily traffic east of the Cloverfield interchange. This net change will result from 19,500 new vehicle trips being added to the freeway by new development and a reduction of 11,300 existing trips to rideshare or transit modes.

The projected 8,200 net new trips per day will divide at the San Diego Freeway, with 2,600 ADT northbound, 2,000 southbound, and 3,600 continuing eastbound on the Santa Monica Freeway. This projected traffic will add approximately one percent to the 1982 volumes, which is a negligible minor impact.

Since the Santa Monica and San Diego Freeways are essentially at capacity east, north, and south of their interchange, this added traffic plus other planned background traffic may cause the peak hour to expand from current conditions.

The Regional Transportation Plan designates Santa Monica as one of 18 Level II centers in the SCAG region. This means that with the exception of downtown Los Angeles, the only Level I center, Santa Monica is designated in the RTP to be one of the highest trip-generating areas of the metropolitan region. It is therefore consistent with the RTP that the concentrated development in the city of Santa Monica produce a large number of vehicle trips (as well as transit trips) and that some of these will be made on roadways of the surrounding neighborhoods of the city of Los Angeles.

It has been further estimated that new land uses in the adjacent areas of the city of Los Angeles will attract approximately 12,000 new daily vehicle trips through the city of Santa Monica. These will be trips without a trip end in Santa Monica which are made on Santa Monica city streets, again, primarily Lincoln, Wilshire, Santa Monica, 26th Street, 23rd Street, and San Vicente, strictly for the purpose of passing through Santa Monica to reach adjacent areas of the region. The RTP designates three nearby Level II

centers, Marina del Rey, Westwood, and Century City, so that it can be expected that each of these nearby concentrations of growth will attract some additional traffic through Santa Monica from adjacent residential areas.

6.8 PARKING

Policies in the Draft Circulation Element prescribe that all new project-generated parking be accommodated on site or at specified off-site locations.

The Draft Circulation Plan also addresses methods to relieve existing parking problems, including creating Preferential Parking Districts in residential areas, and construction of public parking garages in commercial districts such as Downtown and Main Street. Parking assessment districts are proposed for consideration in the Lincoln Boulevard Corridor and in the vicinity of the Santa Monica Library to develop additional parking in order to relieve current problems. Other policies are directed to address recreation parking demand by encouraging shared use of new private commercial parking facilities and better use of existing and planned public parking facilities by linking these to recreation destinations, utilizing a recreation shuttle system. A by-product of the recreation shuttle system is that it will allow a relocation of surface parking from the beach and frontage on the Promenade. Parking needed by Promenade residents is planned to be relocated nearby. A second shuttle is proposed to link employees in the Olympic Corridor to peripheral parking lots and regional transit to relieve problems in that area.

In summary, the Draft Circulation Element should have a beneficial impact on existing and future parking supply and demand.

6.9 TRANSIT

The Draft Circulation Plan will result in approximately 39,000 additional daily transit riders in the year 2000. This represents approximately 8,600,000 additional passengers, annually. Santa Monica Municipal Buslines ridership has been projected to decrease from the 16,630,000 passengers carried in 1980 to 11,500,000 passengers in 1987, as a result of anticipated fare hikes. SMMBL will, therefore, have a significant amount of excess capacity available to carry many of the projected transit riders in the year 2000. The SCRTD bus routes and the potential light rail line(s) serving Santa Monica will also be able to absorb many of these anticipated riders. The key to attracting projected levels of transit ridership will be development of additional funds for light rail operation, so that fares may be maintained at reasonable levels. Adequate funding for light rail capital cost is

Figure 23: Citywide Changes in Noise Levels between 1982 and 2000

Source: Charles M. Salter Associates, Inc.

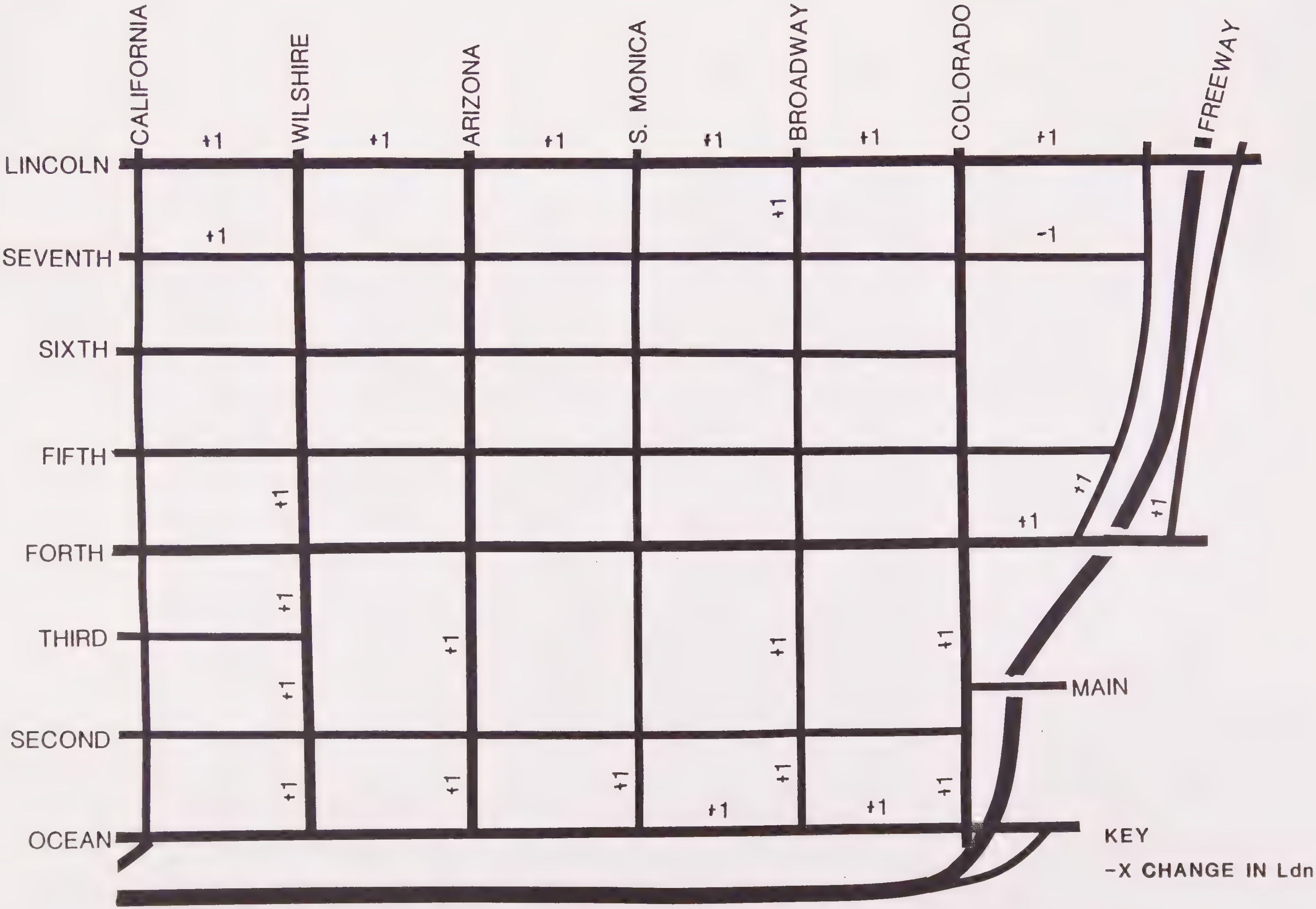


Figure 24: Downtown Changes in Noise Levels between 1982 and 2000

Source: Charles M. Salter Associates, Inc.

6.12 AIR QUALITY

Local Air Quality Impact -- The proposed Draft Land Use and Circulation Elements for the city of Santa Monica anticipate a growth rate of about 60 percent for office use, 30 percent for retail commercial space, small increases in light industrial and residential uses, and a significant increase in city hotel rooms. Growth is directed in a number of designated growth centers. The distribution optimizes the use of available transportation corridors and encourages the use of transit and ridesharing to meet a significant portion of growth-related transportation demand. This consistency with the RTP is expected to generate far fewer automotive emissions than would be generated under the distributed growth assumption.

Vehicular emission distributions from various land use alternatives can readily be calculated using a computer program recently developed by the California Air Resources Board (ARB) called URBEMIS#1. This model combines trip-making characteristics from different land uses with trip length and operating mode data for Southern California to generate an automotive emissions profile as shown in Table 20. The annual emissions burden, trip making, and vehicle-miles traveled (VMT) are slightly overstated because the model is unable to account for trips that originate in one city land use and end in another (double-counting), but what is important are the differences between existing and future emission levels. Future emission levels will be considerably less than in 1982 because continued mandated emissions reduction programs will reduce average emissions per car faster than the growth of traffic in Santa Monica. Table 20 also demonstrates that consistency with the RTP under the proposed growth plan creates a substantial air quality benefit, reducing 3,000 tons of carbon monoxide, 400 tons of hydrocarbons and 200 tons of nitrogen oxides each year upon buildout, compared to existing emissions. However, compared to the 200+ million VMT driven each day in the basin, the 3.8 VMT increase in VMT of the proposed plan is not significant basinwide.

While regional emission levels may not be impacted by the proposed plan, reorientation of city traffic may increase micro-scale pollution distributions. To test for this possibility, traffic data were combined with stagnation meteorology assumptions in the California line source dispersion model, CALINE3. Because of the wide variety of locations potentially affected, the model was exercised only along the most heavily traveled arterial roadway in Santa Monica. It is assumed that if no air pollution problems result along this roadway, then any less traveled roadway will be similarly protected from unhealthful air pollution "hot spots." Results from this analysis along Lincoln Boulevard are presented in Table 21. Carbon monoxide was used as the indicator pollutant. Table 21 shows that speeds of 15 MPH or less may now contribute to localized violation of air standards. In the future, as long as

traffic speeds stay above 5 MPH, no local air quality problems are anticipated. Given the lower regional emissions generation from the proposed plan and the fact that no local air quality degradation is expected, the proposed plan represents a beneficial impact from an air quality perspective.

Relationship with Regional Plan and Cumulative Effect -- The plan conforms to the short-range control tactics of the AQMP that encourage increased transit and ridesharing, as well as to the long-range tactics of the AQMP that see urban form as an important element in reducing vehicular emissions. As previously stated, by concentrating growth into areas with the best transportation access and with the easiest transit access, the proposed plan is in conformity with the RTP, which will result in a definite air quality benefit compared to existing emission patterns. Conformity with the AQMP and RTP will result in a beneficial cumulative effect from the air quality standpoint.

Table 20 - Santa Monica Traffic Vehicular Emissions Generation (tons/year)

Pollutants Generated	Existing 1982	Proposed Plan
Carbon Monoxide	29,419	17,006
Total Hydrocarbons	4,658	2,040
Oxides of Nitrogen	2,398	1,178
Trips Generated	583,176*	625,016*
VMT	3,507,441	3,805,672

* Slight differences in trip generation in the air quality analysis may vary from traffic analysis due to double counting inherent in the air quality model.

Source: Hans Giroux

Table 21 - Micro-scale Carbon Monoxide (CO) Distributions Adjacent to Santa Monica Roadways

Development Alternative	Average Vehicle Speeds 5	10	15	20	25	30
Existing Development	45.2*	27.4*	21.1*	18.0	16.0	14.4
Proposed Plan	25.3*	15.2	11.8	10.1	9.0	8.1

Model Interpretation:

Hourly CO Concentrations in ppm, including a 6 ppm hourly background in 1982 and a 3 ppm background in 2000. Concentrations represent CO levels at 25 feet from the busiest roadway during the morning rush hour.
California one-hour standard = 20 ppm.
* = Predicted violation of the hourly standard.

Model Input Parameters (ARB Theoretical Worst Case Conditions):
Standard California vehicle mix
Temperature = 35 degrees F
Operating Mode = 21 percent cold start, 27 percent hot start, 52 percent hot stabilized
Stability = F, Wind = 2 MPH parallel to Lincoln Boulevard
Hourly traffic volumes = 10 percent of ADT

Source: Hans Giroux

6.13 PARKS AND RECREATION

Forecast growth to the year 2000 will require approximately ten acres of net new park space, based on standards set by the Parks and Recreation Commission. This is in addition to the current 1980 shortfall of 47.5 acres; hence, a total of 57.5 acres.

Residential Dwelling tax is likely to yield 0.2 acres of parks, assuming the fee is indexed for inflation of land.

Policies in the Land Use Plan encourage an open space dedication requirement for usable open space or an in lieu fee for daytime population. Assuming the open space dedication for the Beckett Project of 1.5 acres per 1,000 employees, the implementation of this policy would yield 45 acres of park space.

The plan also recommends setbacks to create usable open space for the Olympic Corridor Linear Park, for the continuation of Palisades Park to Crescent Park, and reuse of the Main Library parking lot for a park.

In summary, the policies of the Draft Land Use Element should have a beneficial impact on parks and recreation by generating adequate facilities to meet existing and future needs.

6.14 POLICE PROTECTION

The proposed action is likely to have negligible impact on police protection and is capable of being mitigated by additional personnel. Year 2000 resident population is projected to increase by approximately 4,000 over 1982, but the daytime population is expected to increase by 50,000 to 80,000 (excluding beach day surges, which are assumed to remain constant).

The effect of these changes on the need for police protection is difficult to quantify, except that the increased traffic and parking congestion will probably require additional meter control staff and similar traffic enforcement. Other additions to the police force and equipment are not directly related to the amount of population, and therefore must be evaluated as the need arises.

6.15 FIRE PROTECTION

The proposed project is likely to have negligible impact on fire protection. Future requirements for fire personnel and equipment are difficult to quantify. They are not simply proportional to daytime or evening population, but are affected by other factors, notably changes in regulations requiring internal fire protection devices (sprinklers, etc.) to be provided by the developer.

6.16 SCHOOLS

Assuming that the proportion of those children who will go to public schools remains constant at 89 percent, projected Santa Monica elementary school enrollment is given in Table 22.

The estimated figures were arrived at by aging, by appropriate death rates, the 1980 school age population of the city, and calculating and aging the children born to the current city population. The projections are also based on the assumption that 59 percent of Los Angeles County age range specific birth rates are applicable to Santa Monica, since the current Santa Monica age-composite birth rate of 9.9/1,000 is 59 percent of the corresponding Los Angeles County figure of 16.8/1,000.

As the projections illustrate, enrollment is well within existing school facility capacity in all years in all grades.

Table 22 - Projection of School Children

Age Range	Public School Capacity	Year	Estimated Enrollment in SM Public Schools
5-11	6,050	1982	3,916*
		1985	3,525*
		1990	4,626
		1995	4,817
		2000	3,689
12-15	3,780	1980	2,314*
		1985	2,139*
		1990	2,245
		1995	3,136
		2000	2,755
16-19	4,776	1980	2,976*
		1985	2,695*
		1990	2,488
		1995	2,251
		2000	2,455

* See Table 7. Estimates by Santa Monica Unified School District.

Source: Hamilton, Rabinovitz and Szanton, Inc.

6.17 WATER

Water Demand -- Table 23 summarizes projected water demand based on forecast growth in population, employment, and land use.

Table 23: Forecast Water Demand to Year 2000

Land Use	Projected Growth 1982-2000	Consumption Rate or Average Daily Demand (gpd)*	Total Additional Demand (gpd)
Residential	2,232 units	155 gpd/unit	345,960
Hotel	2,450 rooms	200 gpd/room	490,000
Office	3,849,271 sf	80 gpd/1000 sf	307,940
Retail	1,705,221 sf	55 gpd/1000 sf	93,775
Industrial	237,830 sf	80 gpd/1000 sf	19,040

Average Daily Water Supply Requirement x 3-Day Emergency Supply

1,566,540 x 3 =

Total Emergency Storage Requirement 4,699,620 = 4.7 MG **

* gpd = gallons per day
** MG = Million Gallons

Source: City of Santa Monica Water Department

Based on the discussion in Environmental Setting, it is concluded that there will be adequate water to serve planned growth from conservation, and success in the city's well production program and from MWD's as a result of completion of the State Water Project. As discussed in Setting, the city's water treatment facilities will need to be upgraded if well production increases and the treated water supply storage and distribution system are adequate to meet future forecast growth.

Water Treatment -- Future increases in well water will require expansion of the water softening plan.

Treated Water Storage -- Adequate capacity of 5 MG exists to accommodate 4.7 MG growth.

Water Distribution -- Generally, the water distribution is adequate to accommodate future growth, except in the Special Office District and the Oceanfront. Minor improvements will be required to increase the capacity of some of the smaller distribution lines in this area.

6.18 SEWER

Future Effluent -- Based on growth projections, it is estimated that an additional 1.183 MGD (Million Gallons per Day) of effluent will be generated by the city (see Table 24).

Table 24 - Forecast Sewage Demand to Year 2000

Use	Projected Addition	Consumption Rate*	Added cfs
Office/Retail	5,554,800 sf	.00014 cfs/1,000 sf	.777
Industrial	237,830 sf	.000184 cfs/1,000 sf	.044
Residential	2,232 units (av. density 35 du/ac) = 63 ac	.0013 cfs/acre	.080
Hotel	2,450 rooms	.116 cfs/300 rooms	.947
TOTAL			1.848 cfs

1.848 cfs x .64 cfs/MDG = 1.183 MGD**

* Converted from Berryman Report figures, as follows:

Commercial: .006 cfs per acre at FAR of 1
.006/43.560 = .00014 cfs per 1000 sf

Industrial: .008 cfs per acre at FAR of 1
.008/43.56 = .000184 cfs per 1000 sf

Source: City of Santa Monica, Hall Goodhue Haisley and Barker

City Collection Facilities -- The majority of this growth is projected in Zones A through E, where existing trunklines have adequate capacity. The only area with limited capacity is the Airport; however, effluent could be lifted with the introduction of a new pump station to the 15-inch line K, which has 1.6 MGD excess capacity.

City of Los Angeles Collection and Treatment Facilities -- Based on growth forecasts and excess capacity discussed in the Setting Chapter, there is adequate capacity in the Los Angeles trunk sewer and the Venice Treatment Plant to accommodate future growth. With the implementation of the city of Los Angeles Wastewater Facilities Plan, there will be adequate sewage treatment capacity to accommodate future growth.

6.19 STORM SEWER

Santa Monica is a built-up city, in terms of impervious surfaces which generate storm water runoff. Future growth is not likely to generate more impervious surfaces; hence, there will probably not

be a need for additional storm drainage facilities, except for localized improvements appropriate for individual development projects.

6.20 SOLID WASTE

City staff have indicated that adequate capacity exists at the Los Angeles County landfill sites to accommodate future growth. Within the next ten years, however, the city is considering constructing a solid waste energy conversion plant, which would reduce the cost of hauling solid waste to the disposal site.

6.21 POWER

Southern California Edison indicates that there are sufficient generating capacity, substations, and distribution lines to handle forecast increased demand for electrical generating capacity in Santa Monica.

6.22 TELEPHONE

General Telephone (GTE) forecasts requirements for telephone service both in the near term and long term (20 years) by means of its economic forecasting model. The model is based on constantly updated financial, economic, and demographic information; forecasts are revised every six months. GTE has an ongoing service improvement program planned to keep up with growth, to modernize the network, and provide new services as they become available.

6.23 GAS

Southern California Gas has indicated that adequate capacity exists to meet forecast growth.

6.24 FISCAL EFFECTS

Under the policies in the Draft Elements, revenues are projected to be $47,632,800 in the year 2000, while expenditures are expected to be $43,661,900. This means that the city will be operating with a net surplus of $3,970,900 in that year. The methodology for developing revenue and expenditure figures is reported in detail in HRS' "City-wide Revenues and Expenditures," May, 1983.
For purposes of calculating fiscal effects, it is necessary to make assumptions about the regulations adopted to implement the policies in the Draft Elements. For purposes of this calculation, it is assumed that future development standards are adopted within the ranges included in the Land Use Element. Changes in the regulations adopted from those proposed would produce changes in the projected fiscal effects.

Given the concern of Wilshire Boulevard property owners noted below, it has been assumed that the changes in policies recommended could cause some decline in property values, and therefore in revenues from property taxes collected. The assumed change is based on an average value for land and improvements of $80.65 in 1982 constant dollars if current regulations are continued in force, compared with a similarly defined value of $68.97 if policies recommended in the Element are adopted. This translates into an incremental increase of $42,520 in property tax revenues in the year 2000 above current receipts from these properties.

It is projected that the largest source of city revenue will continue to be the sales tax. Under the policies in the Draft Elements, sales tax receipts are projected to rise to $15,293,100 in the year 2000. Transient occupancy tax is projected to rise to over $4,300,000 if the policies in the Draft Element are adopted.

The largest set of city expenditures is made for police and fire protection. Police and fire expenditures are estimated at $23,682,275 under the policies suggested in the Draft Land Use Element.

It is important to note that these figures include all operating and capital expenditures in the normal city operating and capital budget. They do not include capital expenditures necessary to implement specific improvements recommended in the urban design, park, or traffic recommendations in the Draft Elements. The intent of the city is to finance these improvements through devices which do not create a load on the city's General Fund. For example, streetscape improvements in the Wilshire and Santa Monica corridors, and other improvements in the Oceanfront, the Olympic Corridor, and the Downtown, would be financed by the use of benefit assessment districts and the establishment of a redevelopment area in which a portion of the increased revenues in the area would be subject to tax increment financing. The only capital improvements likely to be financed from existing revenues would be streetscape improvements on Pico Boulevard, Lincoln Boulevard, and Broadway. While it is impossible to indicate an exact cost for such improvements until the city adopts design guidelines, the contemplated street furniture, street trees, and signage are unlikely to place a substantial burden on the surplus generated by the year 2000. The alternate financing measures are further discussed in the Implementation chapter of the Draft Land Use and Circulation Elements. See Appendix D for further analysis of sources and uses of funds.

6.25 ECONOMIC EFFECTS

The economic impact of the proposed Draft Elements is difficult to assess with great specificity, since such an assessment involves assumptions about the zoning changes the city will adopt to implement policies in the Draft Elements, and about the economics of

particular projects on particular pieces of land and under particular development situations. For this reason, General Plan EIRs do not usually analyze economic impacts. However, in view of the concern of some groups of city residents about the economic impacts of new land use regulations, the city has specifically addressed this potential impact. Nevertheless, it is possible only to indicate generally the economic consequences that might result, given the general nature of the Draft Elements.

It is assumed here that the major economic impact of proposed changes in land use policies falls on land owners. Changes in policies are likely to cause changes in the market value of land, which developers take into account in their calculation of the viability of particular projects. Development is no more or less profitable before or after changes in regulations, assuming that land is acquired at a price reflecting its development potential.

In general, the policies in the Draft Elements reduce allowable density and intensity of use from the maximum intensities permitted by zoning in all districts of the city. However, it is not expected that the policies recommended here will cause decreases in land values, because building is, in most cases, not in fact being undertaken to the limits of density and intensity regulations now a part of the city's zoning ordinance. This is so in part because of the additional economic implications of parking and building code requirements. Thus, the proposed reductions are far less great, when the "practical maximum floor area ratios" which are being used as building limits are compared to the recommended floor area ratios in the implementation guidelines for the Draft Elements policies, than if the comparison is to existing regulations.

In addition, the adoption of the Draft Elements, involving the replacement of the existing interim development permit system with one involving more standardized rules, should cause an acceleration of interest in development in the city, which could raise land values. As previously noted, the major cumulative effect on land use resulting from the Draft Elements will be an increase in the average intensity of non-residential uses in the city.

In particular, the proposed action is likely to have a positive effect on property values in the proposed Special Office District of the Olympic Corridor, since the policies permit land to be sold for office development, for which there appears to be substantial demand, without the restrictions in the interim permit regulations, which link any office development to predominantly industrial use.

The policies are also likely to have a positive effect on property values in the Oceanfront, where a city effort to establish the area as a magnet for visitor and recreation activities is likely to enhance the value of land available for retail and hotel space.

In the Downtown, the proposed action is also likely to have a positive effect on property values. The building intensities suggested are quite similar to existing practical maximums. Draft Elements policies targeting comparison retail to be located in the Downtown and the spillover of retail trade generated from Oceanfront policies to spur visitor and recreation activity should also increase interest in acquisition and development of retail sites in the Downtown.

On Wilshire Boulevard, proposed policies in the Draft Elements may make likely less extensive commercial development on the street than some landowners had anticipated in acquiring their properties. The Draft Elements do intend that commercial development be focused in the Downtown and Special Office District areas rather than principally on Wilshire Boulevard. It is difficult to predict whether this expectation will cause land prices to decrease somewhat from present levels. For purposes of the fiscal analysis reported in the prior section, it has been assumed that there will be some decline. However, it is possible that no decline will actually occur, because the greater scarcity of space and resultant rental rates on this desirable street will offset the effect of the limitation on development potential. (In addition, economic costs must be balanced against the non-economic benefits to residents of adjacent neighborhoods, which are discussed in other sections of this report.)

The economic impact of the proposed action on other areas of the city where policy changes are proposed is less clear-cut. Since traffic on Lincoln Boulevard is already exceeding its carrying capacity, the Draft Circulation Element proposes that the city consider restricting parking during peak hours on Lincoln Boulevard and creating a means of locating the existing on-street parking off street during those hours. Were the city to adopt this recommendation, access to retail establishments might be somewhat reduced. However, parking on Lincoln Boulevard is already somewhat limited by the number of curb cuts on the street, so the number of spaces removed by a ban on on-street parking at peak hours may have only a limited impact on businesses located along the Boulevard.

The plan also proposes to conserve existing neighborhood commercial areas on Montana, 26th, Pico, and Ocean Park Boulevards, and create two new neighborhood commercial areas, on Pico Boulevard from 31st to 34th Streets, and an overlay zone on Wilshire Boulevard from 12th to 16th Streets. The neighborhood commercial overlay zone on Wilshire Boulevard is unlikely to effect values negatively in that area, since care has been taken to keep allowable intensity identical to that for the rest of Wilshire while requiring that only ground floor street frontage be devoted to neighborhood commercial uses.

An additional feature of the proposed plan is the creation on Broadway, from 8th Court to 20th Street, of a mandatory mixed-use district requiring incorporation of residential space into all commercial projects. It is assumed that the housing component of this mix will be market rate housing. While no specific pro formas have been done to analyze the economic impact of these regulations, the trend toward mixed-use development is accelerating in suburban and small city locations around the country, and such projects are increasingly regarded as a way to attract higher density, quality development. If this is the experience in Santa Monica, no negative effect on land values will occur. If, over time, developers demonstrate that the development of mixed-use projects on Broadway is unfeasible, the city may wish to consider in specific projects providing funding to assist in the implementation of the residential component of the mixed-use district.

The Draft Elements propose to conserve existing residential districts. Allowable density is consistent with the densities of recently constructed projects, which have generally been below what was allowable under current zoning, largely as a result of parking requirements, parking construction economics, and general market demand for lower density, larger residential units.

7.0 CATEGORICAL SUBJECTS

7.1 SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED

The proposed project does not generate any significant adverse effects. Conversely, the proposed project obviates or self-mitigates many of the existing adverse environmental effects and hence generates many significant beneficial effects. This is not to imply that there will not be any adverse environmental effects of the proposed project; on the contrary, there will be some with respect to traffic, air quality, and noise, as discussed above. However, none of these adverse effects is significant.

7.2 ALTERNATIVES TO THE PROPOSED ACTION

Table 25 compares the differences between the proposed action and two alternatives outlined below. The comparison topics are limited to those where there is a measurable or significant difference. The following topics are not discussed, because there is no significant difference between the alternatives or the difference is unmeasurable: geology, hydrology, noise, public services, and facilities. It should be noted that if reserve capacity existed in the city's facilities or services and this was not exceeded by forecasted growth, the effect of the alternative was not deemed significant.

7.2.1 Continuation of Pre-existing Land Use and Circulation Element and Zoning

This alternative is herein referred to as Baseline Alternative, because it would be a continuation of current policy. Accordingly, it may be considered a no project or no action alternative.

If the Land Use and Circulation Elements were not adopted and pre-existing policy were continued to the year 2000, the principal environmental effects are summarized in Table 25. It should be noted in this alternative that projected land use growth would be the same as for the proposed action, with the exception of 1,900 fewer hotel rooms than the proposed project. The implementation of this scenario would result in many adverse environmental impacts obviated by the proposed action. For more information on the environmental, land use, traffic, fiscal, and population consequences of Scenario 1, refer to the Background Analysis Reports.

Table 25. Evaluation of Alternatives

EVALUATION OF ALTERNATIVES:	Baseline (no project)	Task Force Recommendations	Proposed Action
LAND USE	Continuation of past harmful trends: scattered growth demand pre-empted by a few large projects, etc.	Loss of 400,000 s.f. of office demand, due to rigid restrictions in Olympic Corridor.	Commercial growth guided to areas of the city which will result in the least environmental impact.
Office	3.8 million s.f.	3.4 million s.f.	3.8 million s.f.
Retail	Continued decline of Mall.	Same as Baseline.	Revitalization of Mall.
Hotel	950 rooms; no cohesive visitor-serving district.	400 rooms; no cohesive visitor-serving district.	Proposes 2,850 hotel rooms, concentrated in the Oceanfront and forming a well-planned, cohesive visitor-serving district. Allows residential in most districts; encourages residential mixed use as a transition adjacent to commercial areas; requires residential in Broadway mixed use district. Major new parks in Oceanfront, Olympic Corridor, and eastern Downtown.
Residential	Restricts residential in commercial districts.	No incentives for new housing in Broadway and Downtown.	
Parks	Shortfall of 55 acres in Year 2000.	Same as Baseline.	
URBAN DESIGN	Continuation of past harmful effects of development:	Same as Baseline.	Proposed guidelines to:
Visual Character	massing and materials alien to context,	Same as Baseline.	improve visual character of all districts, by
Shading	undesirable shading of public spaces	Same as Baseline.	ensuring sunlight for public spaces,
Wind	wind acceleration caused by unarticulated buildings,	Same as Baseline.	encouraging vertical and horizontal articulation of facades,
Pedestrian Environment	deterioration of the street-level environment for pedestrians.	Same as Baseline.	and improving the continuity, attractiveness, and pedestrian character of the streetscape environment.
CIRCULATION[1]	129,260 new vehicle trips generated Year 2000.	117,570 new vehicle trips generated Year 2000	27,700 new vehicle trips generated Year 2000.
Traffic	Continued intrusion into residential neighborhoods.	Same as Baseline.	TSM and neighborhood traffic control to protect residential neighborhoods,
Transit	4.5% of all trips.	Same as Baseline.	Double transit share to 9% of all trips, encourage ride-sharing.
Parking	Continuing intrusion of employee parking into residential neighborhoods.	Same as Baseline.	Require fulfillment of parking requirements on site, encourages reduced intrusion of employee parking into neighborhoods.
FISCAL[2]			
Net Tax Revenue to City	Net revenues of approximately $1,280,000.	Net revenues of approximately $584,000.	Net revenues of approximately $4,000,000, the increase being largely due to added hotel tax from new Oceanfront District.
EMPLOYMENT			
New Jobs	Approximately 28,000 (increase of 51%)	Approximately 26,000 (increase of 47%).	Approximately 30,000 (increase of 54%).
ENVIRONMENTAL			
Air Quality	Does not conform with short term or long term control strategies of the Regional Air Quality Management Plan.	Same as Baseline.	Conforms with both short and long term control strategies of the Regional Air Quality Management Plan.

1 [illegible]
2 [illegible]
3 [illegible]

7.2.2 Commercial and Industrial Task Force Recommendations --

This alternative is also referred to as Resolution 6385 and Scenario 2 in the Issue Papers. The principal environmental effects of this alternative are summarized in Table 25. It should be noted that projected land use growth would be similar to the Baseline Alternative, with the exception of 400,000 square feet less office space due to restrictive office land use policies in the Industrial Corridor. These restrictive policies have the effect of directing growth outside Santa Monica, but to nearby areas, causing the city to generally incur the same adverse traffic impacts as Baseline, but not the additional net revenue to the city's general fund. For more information on the environmental, land use, traffic, fiscal, and population consequences of Scenario 2, refer to the Background Analysis Reports.

7.3 RELATIONSHIP BETWEEN SHORT-TERM USES AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Implementation of the plan in the short term should result in beneficial long-term enhancement of Santa Monica's environment, with the exception of those impacts addressed in paragraph 5.1. However, given the city's goals and range of alternatives considered in paragraph 5.2, the proposed action would be more beneficial than if current policy were continued or if Commercial and Industrial Task Force policy were implemented.

7.4 GROWTH-INDUCING IMPACT

As described under Plan Concept, it is a basic tenet of the Plan to accommodate growth that is forecast for the city, and which would occur regardless of whether the Land Use and Circulation Elements were implemented or not. Hence, the proposed action has no growth-inducing impact. The Draft Plan does direct growth to areas where it would result in the least environmental impact, so to the extent the draft plan induces growth, such inducement would result in a beneficial effect.

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INITIAL STUDY FOR THE

LAND USE AND CIRCULATION ELEMENTS
SANTA MONICA GENERAL PLAN

Prepared by:

Kenyon Webster, Assistant Planner
Christopher Rudd, Assistant Planner

Program and Policy Development Division
Community and Economic Development Department
City of Santa Monica
1685 Main Street
Santa Monica, CA 90401

(213) 393-6881

CITY OF SANTA MONICA

EIA NO. 745

INITIAL STUDY

DATE FILED June 16, 1983

I. Background

1. Name of Proponent City of Santa Monica
Program and Policy Development Division

2. Address and Phone Number of Proponent 1685 Main Street
Santa Monica, California 90401
Phone: 393-6881 or 393-6655

3. Project Address Incorporated area of Santa Monica

Name of Proposal, if applicable Land Use and Circulation Elements

II. Environmental Impacts

(Explanations of all "yes" and "maybe" answers are required on attached sheets.)

	Yes	Maybe	No
1. Earth. Will the proposal result in:			
a. Unstable earth conditions or in changes in geologic substructures?			X
b. Disruptions, displacements, compaction or overcovering of the soil?	X		
c. Change in topography or ground surface relief features?			X
d. The destruction, covering or modification of any unique geologic or physical features?			X
e. Any increase in wind or water erosion of soils, either on or off the site?			X
f. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?			X

	Yes	Maybe	No
g. Exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?	X		
2. Air. Will the proposal result in:			
a. Substantial air emissions or deterioration of ambient air quality?		X	
b. The creation of objectionable odors?			X
c. Alteration of air movement, moisture, or temperature, or any change in climate, either locally or regionally?		X	
3. Water. Will the proposal result in:			
a. Changes in currents, or the course of direction of water movements, in either marine or fresh waters?			X
b. Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?		X	
c. Alterations to the course or flow of flood waters?			X
d. Change in the amount of surface water in any water body?			X
e. Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity?			X
f. Alteration of the direction or rate of flow of ground waters?			X
g. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?			X
h. Substantial reduction in the amount of water otherwise available for public water supplies?			X
i. Exposure of people or property to water related hazards such as flooding or tidal waves?		X	

	Yes	Maybe	No
4. **Plant Life.** Will the proposal result in:			
a. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, and aquatic plants)?			X
b. Reduction of the numbers of any unique, rare or endangered species of plants?			X
c. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?			X
d. Reduction in acreage of any agricultural crop?			X
5. **Animal Life.** Will the proposal result in:			
a. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms or insects)?			X
b. Reduction of the numbers of any unique, rare or endangered species of animals?			X
c. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?			X
d. Deterioration to existing fish or wildlife habitat?			X
6. **Noise.** Will the proposal result in:			
a. Increases in existing noise levels?		X	
b. Exposure of people to severe noise levels?			X
7. **Light and Glare.** Will the proposal produce new light or glare?		X	
8. **Land Use.** Will the proposal result in a substantial alteration of the present or planned land use of an area?		X	
9. **Natural Resources.** Will the proposal result in:			
a. Increase in the rate of use of any natural resources?			X

	Yes	Maybe	No
b. Substantial depletion of any nonrenewable natural resource?			X
10. Risk of Upset. Will the proposal involve:			
a. A risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?			X
b. Possible interference with an emergency response plan or an emergency evacuation plan?			X
11. Population. Will the proposal alter the location, distribution, density, or growth rate of the human population of an area?		X	
12. Housing. Will the proposal affect existing housing, or create a demand for additional housing?		X	
13. Transportation/Circulation. Will the proposal result in:			
a. Generation of substantial additional vehicular movement?		X	
b. Effects on existing parking facilities, or demand for new parking?		X	
c. Substantial impact upon existing transportation systems?		X	
d. Alterations to present patterns of circulation or movement of people and/or goods?		X	
e. Alterations to waterborne, rail or air traffic?		X	
f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?		X	
14. Public Services. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:		X	
a. Fire protection?		X	
b. Police protection?		X	
c. Schools?		X	

	Yes	Maybe	No
d. Parks or other recreational facilities?		X	
e. Maintenance of public facilities, including roads?		X	
f. Other governmental services?		X	
15. Energy. Will the proposal result in:			
a. Use of substantial amounts of fuel or energy?			X
b. Substantial increase in demand upon existing sources of energy, or require the development of new sources of energy?			X
16. Utilities. Will the proposal result in a need for new systems, or substantial alterations to the following utilities:			
a. Power or natural gas?			X
b. Communications systems?			X
c. Water?		X	
d. Sewer or septic tanks?		X	
e. Storm water drainage?		X	
f. Solid waste and disposal?		X	
17. Human Health. Will the proposal result in:			
a. Creation of any health hazard or potential health hazard (excluding mental health)?			X
b. Exposure of people to potential health hazards?			X
18. Aesthetics. Will the proposal result in the obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view?		X	
19. Recreation. Will the proposal result in an impact upon the quality or quantity of existing recreational opportunities?		X	
20. Cultural Resources.			
a. Will the proposal result in the alteration of or the destruction of a prehistoric or historic archaeological site?		X	

	Yes	Maybe	No
b. Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object?		X	
c. Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values?			X
d. Will the proposal restrict existing religious or sacred uses within the potential impact area?			X
21. Mandatory Findings of Significance.			
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X	
b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future.)		X	
c. Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.)		X	
d. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X	

III. Discussion of Environmental Evaluation

IV. Determination
(To be completed by the Lead Agency)

CITY OF SANTA MONICA
DEPARTMENT OF COMMUNITY AND ECONOMIC DEVELOPMENT

CITY HALL, 1685 MAIN STREET, SANTA MONICA, CALIFORNIA 90401-3295 *PHONE (213) 393-9975*

June 8, 1983

Supplement to Initial Study For The Land Use and Circulation Elements of the General Plan, City of Santa Monica

This report supplements the attached "Initial Study" form which examines potential impacts related to the proposed revised Land Use and Circulation Elements of the General Plan for the City of Santa Monica, California. Maps showing the location of the project are attached.

Background

The City of Santa Monica is an incorporated charter city of approximately 8.3 square miles bordered on three sides by the City of Los Angeles and on one side by the Pacific Ocean. Santa Monica is highly urbanized with an extensive network of streets and highways and with a variety of existing land uses. Utility systems, including water, sewers, storm drains, gas, electrical and telephone, are in place. The City has its own Police, Fire, General Services, and Recreation departments and in addition operates an airport, a bus company and a pier. The 1980 Census found 88,314 residents of Santa Monica, with considerable socio-economic diversity.

Description of Project

Land Use Element

The Land Use Element is a State mandated component of the General Plan which designates the proposed general distribution and general location and extent of the uses of land for housing, business, industry, open space, recreation, etc. The Element contains statements on the standards for population density and building intensity for the various use districts in the Element.

The Element is adopted by the City Council and embodies the City's land use goals and policies. It serves to guide future City decision-making regarding the orderly development of the City.

Circulation Element

The Circulation Element is a State mandated component of the General Plan which indicates the location and extent of existing and proposed streets, transportation routes, local public utilities, etc. The appropriate capacity and location of these circulation facilities is correlated with the location and intensity of land uses as stated in the Land Use Element.

The Element is adopted by the City Council and embodies the City's circulation goals and policies. It serves to guide future City decision-making regarding the movement of people and goods around the City.

Guidelines for Implementation

The Guidelines for Implementation is a technical report that describes the appropriate specific standards that will best implement the City's adopted Land Use and Circulation Elements. The Guidelines for Implementation is not a part of the adopted General Plan.

The Guidelines for Implementation is approved by the City Council and can be used to draft specific ordinances or to take other action when the City begins to implement the policies that are adopted in the Land Use and Circulation Elements.

Explanation of Responses

In compliance with the instructions of the "Initial Study" form, this section provides a discussion of all "yes" and "maybe" answers. Please note that the responses include consideration of secondary impacts of adoption of the revised Elements, in addition to primary, direct consequences of adoption.

1b. Will the proposal result in disruptions, displacements, compaction or overcovering of the soil?

Response: This item is checked "yes". By allowing additional development, the project is likely to result in impacts in this area. While because of the City's highly urbanized nature it is unlikely impacts will be significant, additional impact analysis is needed.

1g. Will the proposal result in exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?

Response: This item is checked "yes". By allowing additional development, the project may result in exposure of people and property to various geologic hazards. The City's Seismic Safety Element, Public Safety Element and other data sources indicate that some such hazards exist. Additional analysis is needed.

2a. Will the proposal result in substantial air emissions or deterioration of ambient air quality?

Response: This item is checked "maybe". Emissions generated by vehicle trips associated with development allowed by the project may result in deterioration of air quality. Other impacts from short-term construction activity or industrial development may also occur. Additional analysis is needed to determine significance of potential impacts.

2c. Will the proposal result in alteration of air movement, moisture, or temperature, or any change in climate, either locally or regionally?

Response: This item is checked "maybe". Development allowed by the project may create shadow and wind effects. Additional analysis is needed.

3b. Will the proposal result in changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?

Response: This item is checked "maybe". Development allowed by the project may result in additional land being covered by hard surfacing, reducing absorption rates and increasing surface runoff. While because of the highly developed nature of the City, significant impacts appear unlikely, additional analysis is needed.

3i. Will the proposal result in exposure of people or property to water-related hazards such as flooding or tidal waves?

Response: This item is checked "maybe". The additional development allowed by the project may result in exposure of people and property to water-related hazards. Additional analysis is needed.

6a. Will the proposal result in increases in existing noise levels?

Response: This item is checked "maybe". The additional development allowed by the project may generate added vehicle trips which may increase noise levels. The Noise Element of the General Plan indicates that some areas are currently noise-impacted. Additional analysis is needed.

7. Will the proposal produce new light or glare?

Response: Development allowed by the project may produce new light and glare through added lighting fixtures and building materials. Further analysis is needed.

8. <u>Will the proposal result in a substantial alteration of the present or planned land use of an area?</u>

<u>Response</u>: This item is checked "maybe". The Land Use and Circulation Elements may include a variety of policies and programs which could alter current land use patterns or designations. Analysis discussing the proposed changes and potential impacts is needed.

11. <u>Will the proposal alter the location, distribution, density, or growth rate of the human population of an area?</u>

<u>Response</u>: This item is checked "maybe". The proposed project may affect the population of the City in a variety of ways, including overall density, total numbers, location, and rate of growth. Additional analysis is needed.

12. <u>Will the proposal affect existing housing, or create a demand for additional housing?</u>

<u>Response</u>: This item is checked "maybe". Changes in land uses and circulation patterns may affect existing housing. Non-residential development allowed by the project may produce demand for housing. Additional analysis is needed.

13a-f. <u>Will the proposal result in changes to transportation and circulation systems?</u>

<u>Response</u>: These items are checked "maybe". The project may result in the generation of added traffic and new parking demand. Further, alterations to present circulation patterns may occur, and traffic hazards may increase. Additional analysis is needed.

14. <u>Will the proposal have an effect upon, or result in a need for new or altered governmental services in fire protection, police protection, schools, parks or other recreational facilities, maintenance of public facilities, including roads, or other governmental services?</u>

<u>Response</u>: These items are checked "maybe". The development permitted by the project may increase the demand for all of the governmental services cited. Additional analysis is needed.

16. <u>Will the proposal result in a need for new systems, or substantial alterations to the following utilities: water, sewer or septic tanks, storm water drainage, or solid waste disposal?</u>

<u>Response</u>: These items are checked "maybe". Development allowed by the project may result in a need for alteration of the utility systems identified. Additional analysis is needed.

18. <u>Will the proposal result in the obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view?</u>

<u>Response</u>: Development allowed by the project may obstruct scenic views. Additional analysis is needed.

19. Will the proposal result in an impact upon the quality or quantity of existing recreational opportunities?

Response: This item is checked "maybe". The project may result in intensification in the use of recreational facilities with some potential for reduction in quality of recreational opportunities. Additional analysis is needed.

20a. Will the proposal result in the alteration of or the destruction of a prehistoric or historic archaeological site?

Response: This item is checked "maybe". One potential archaeological site has been identified in the City. This site may be affected by the development allowed by the project. Additional analysis is needed.

20b. Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object?

Response: A number of buildings and structures in the City have been designated historical or architectural landmarks. A recent survey has identified additional buildings and structures which may merit designation. The development allowed by the proposed project may adversely affect these resources. Additional analysis is needed.

21. Mandatory Findings of Significance.

a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future).

c. Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant).

d. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Response: Each of these items is checked "maybe". Based on responses to other items, it appears that potential for impacts cited exists and requires further analysis.

DETERMINATION

Project Title: Land Use and Circulation Elements

On the basis of this initial evaluation:

I find that the proposed project could not have a significant effect on the environment, and a Negative Declaration will be prepared. ☐

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A Negative Declaration will be prepared. ☐

I find the proposed project may have a significant effect on the environment, and an Environmental Impact Report is required. ☒

June 16, 1983
Date

Kenyon Webster
Signature

Assistant Planner
Title

TRAFFIC

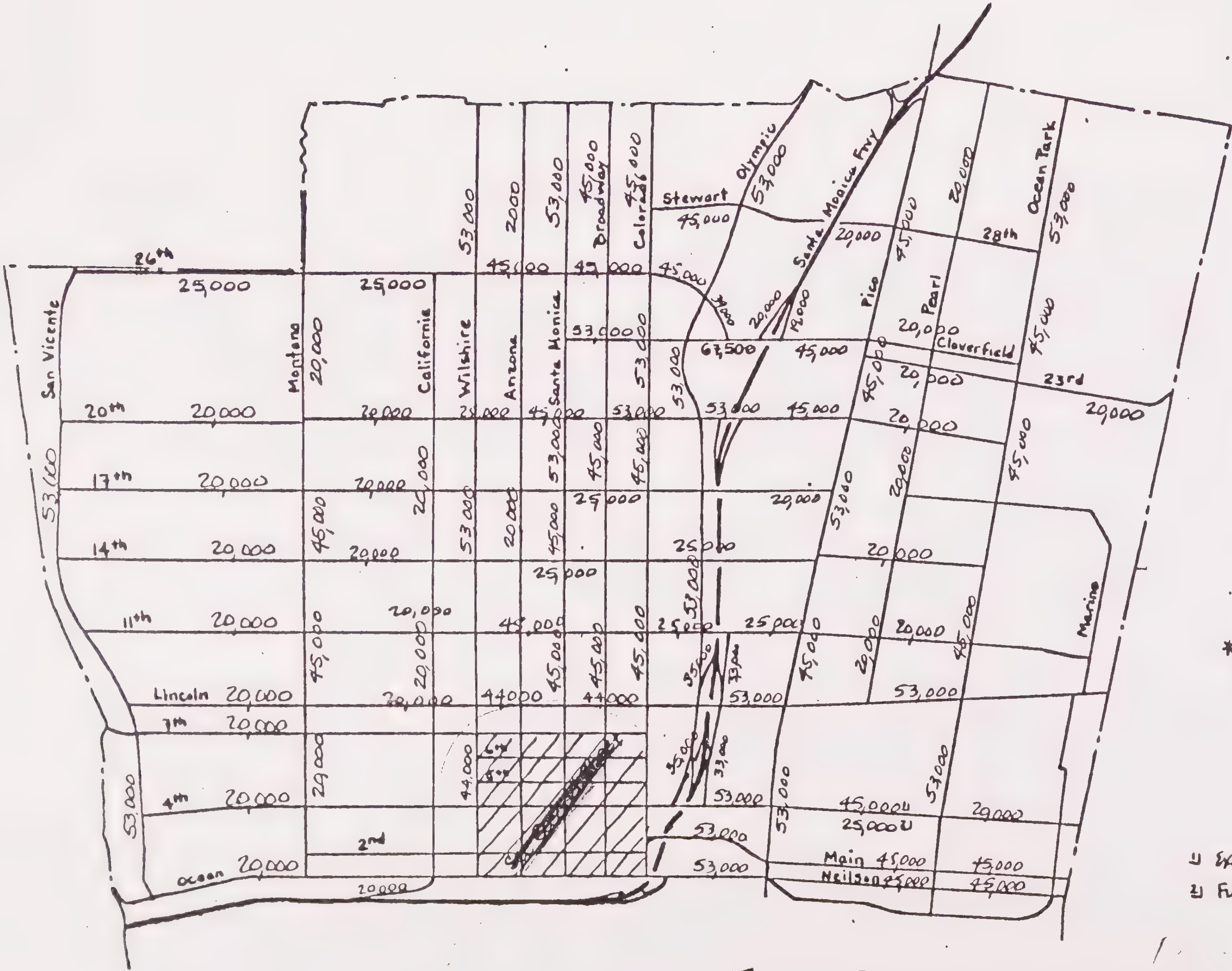
Prepared by:

PRC Voorhees, Incorporated

PEAK HOUR SERVICE LEVEL DEFINITIONS

Service Level	Traffic Conditions
A	Typically the approach to the intersection appears quite open and turning movements are easily made.
B	The approach to the intersection is occasionally fully utilized and some delay may be encountered in turning movements. If signalized, no vehicle waits longer than one red indication.
C	Driver begins to feel somewhat restricted, the approach to the intersection is often loaded and back-ups may occur behind turning vehicles. If signalized, the driver may have to wait more than one red indication.
D	Increasing restriction causing substantial delays and queues on approaches to intersection. Queues do not become excessive but are generally present throughout the peak period. If signalized, vehicles may wait longer than two red indications.
E	Maximum capacity of intersection. Long queues of vehicles waiting upstream of the intersection. If signalized, vehicles may be delayed up to several signal cycles.
F	Completely unstable condition when intersection is completely jammed. Back-ups from locations downstream or on cross street may restrict movement of vehicles out of approach.

Service level designations & descriptions of traffic conditions are from page 130, "Highway Capacity Manual", 1965.



Daily Roadway Capacities - Level of Service E*

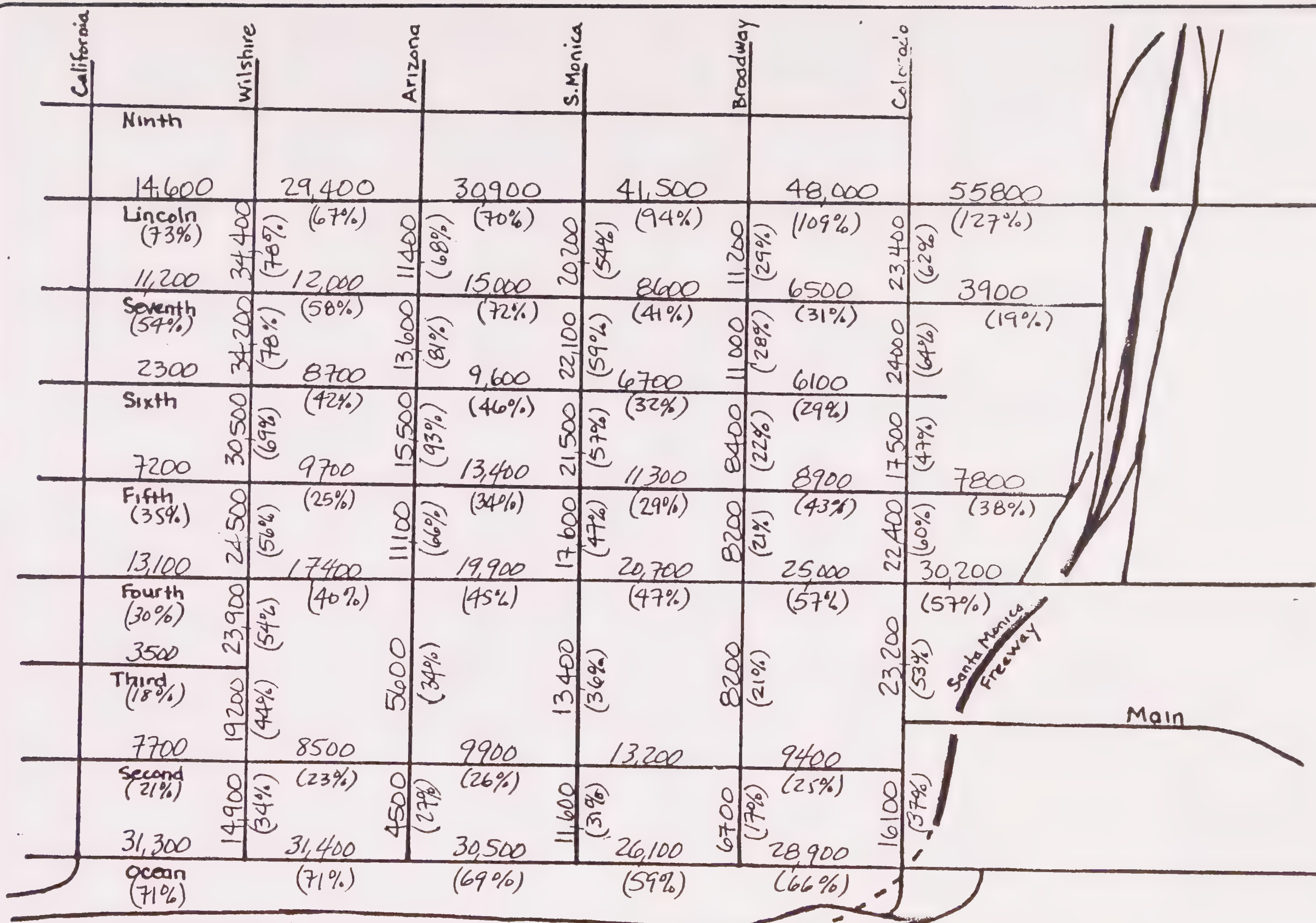
* At 75% of Daily Capacity peak hour capacity problems will begin to occur.

1) Existing capacity
2) Future reduced capacity

Figure 3

SANTA MONICA GENERAL PLAN: TRIP GENERATION BY FUNCTIONAL AREA

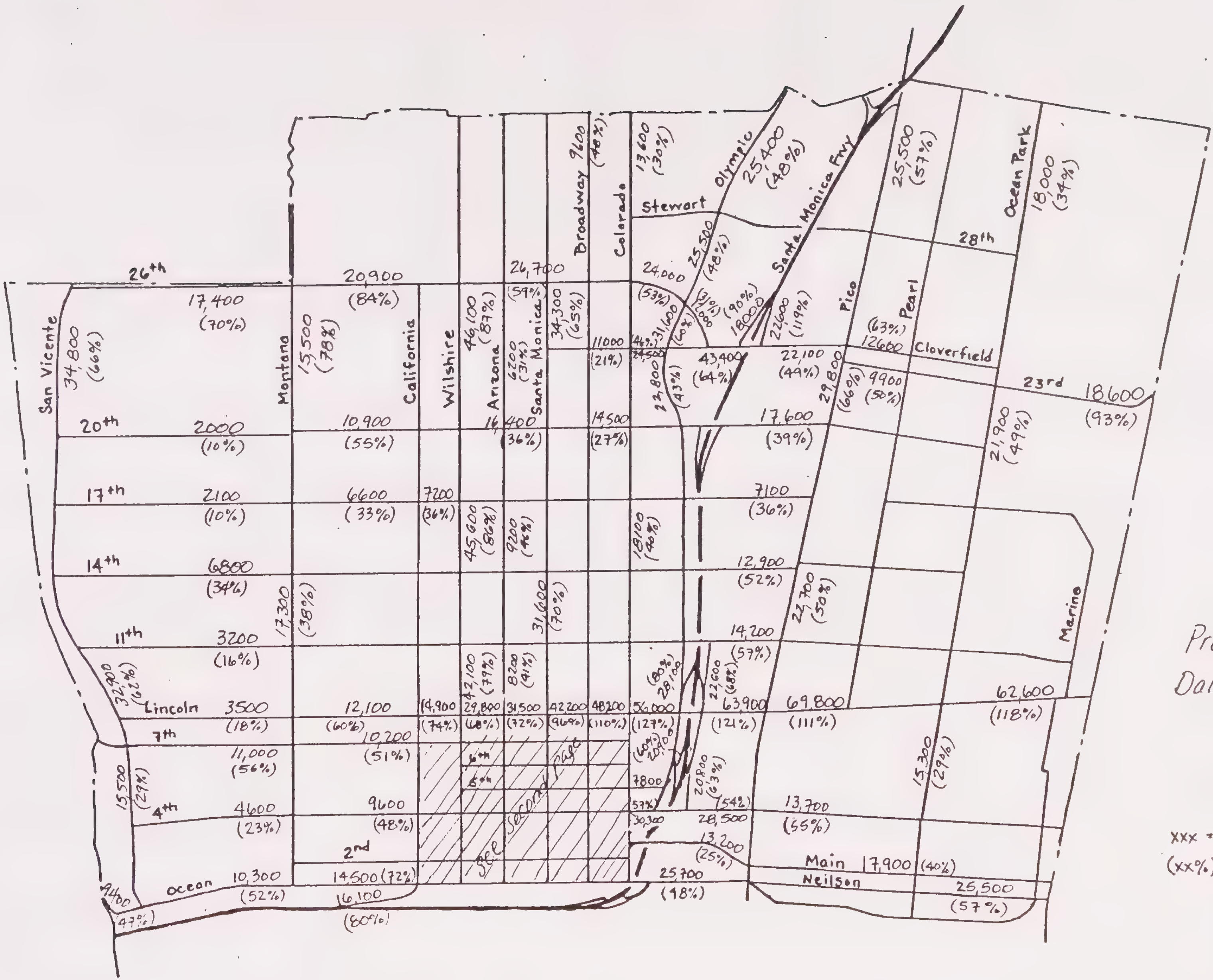
		1982		NET INCREASES: BY SCENARIO			
		EXISTING		BASELINE		6385	
FUNCTIONAL AREA	LAND USE	SQUARE FOOTAGE	DAILY TRIPS GENERATED	SQUARE FOOTAGE	DAILY TRIPS GENERATED	SQUARE FOOTAGE	DAILY TRIPS GENERATED
Downtown	Office	2,337,383	28,750	1,050,851	12,920	1,050,851	12,920
	Retail	1,874,000	62,600	848,174	29,260	853,174	29,430
	Residential	1231 DUs	7,510	-		50 DUs	300
	TOTAL (% incr)	98,860		42,180 (+43%)		42,650 (+43%)	
Industrial Corridor	Industrial	3,231,600	17,550	237,830	1,290	237,830	1,290
	Office	983,000	12,090	1,751,419	21,540	1,136,350	13,980
	Retail	461,000	21,940	57,978	4,590	57,978	4,590
	Hotel			400 Rms	4,200	400 Rms	4,200
	Residential						
	TOTAL (% incr)	51,580		31,620 (+61%)		24,060 (+47%)	
Wilshire/ Santa Monica Corridor	Office	1,101,000	13,540	700,567	8,620	913,567	11,240
	Retail	1,421,677	37,670	397,316	16,050	397,316	16,050
	Residential	5677 DUs	34,630	452 DUs	2,760	452	2,760
	TOTAL (% incr)	85,840		27,430 (+32%)		30,050 (+32%)	
Lincoln Corridor	Office	171,100	2,100	115,470	1,420	218,478	2,690
	Retail	567,000	19,560	98,399	7,780	205,399	10,250
	TOTAL (% incr)	21,310		9,200 (+43%)		12,940 (+61%)	
Broadway	Industrial	40,000	220				
	Office	115,000	1,410	115,478	1,420	12,478	150
	Retail	57,000	4,510	126,735	7,650	19,735	2,280
	Residential	1506 DUs	26,050	162 DUs	80	14	80
	TOTAL (% incr)	15,330		9,150 (+60%)		2,510 (+16%)	
Pico	Office	107,000	1,320	115,478	1,420	115,478	1,420
	Retail	380,000	15,350	25,578	2,960	25,578	2,960
	Residential	4271 DUs	26,050	162 DUs	990	162 DUs	990
	TOTAL (% incr)	42,720		5,370 (+13%)		5,370 (+13%)	
Sunset Park	Office	1,381,586	16,990				
	Retail	115,200	6,960	50,000	3,960	50,000	3,960
	Residential	6732 DUs	41,060	446 DUs	2,720	466 DUs	2,840
	TOTAL (% incr)	65,010		6,680 (+10%)		6,800 (+10%)	
Ocean Park	Office	33,000	400				
	Retail	363,000	14,670	25,578	2,960	25,578	2,960
	Residential	7061 DUs	43,070	471 DUs	2,870	421 DUs	2,570
	TOTAL (% incr)	58,140		5,830 (+10%)		5,530 (+10%)	
North of Montana	Office	65,000	800				
	Retail	220,000	10,980	20,473	2,370	20,473	2,370
	Residential	5298 DUs	32,320	37 DUs	230	37 DUs	230
	TOTAL (% incr)	44,100		2,600 (+6%)		2,600 (+6%)	
Douglas Park	Residential	1400 DUs	8,540	64 DUs	390	64 DUs	390
	TOTAL (% incr)	8,540		390 (+5%)		390 (+5%)	
Oceanfront	Office	196,000	2,410				
	Retail	115,000	6,960				
	Residential	730 DUs	4,450	4 DUs	20	4 DUs	20
	Hotel	483 Rms	10,320	550 Rms	5780		
	TOTAL (% incr)	20,770		5800 (+28%)		20 (+0%)	
Wilshire to Montana	Residential	12231 DUs	74,610	583 DUs	3,560	583	3,560
	TOTAL (% incr)	74,610		3,560 (+5%)		3,560 (+5%)	
Total Gross Trip Generation	Industrial	3,271,600	17,760	237,830	1,290	237,830	1,290
	Office	6,489,969	79,838	3,849,271	47,350	3,447,202	42,400
	Retail	5,484,000	97,830	1,650,231	77,580	1,655,226	74,850
	Residential	46137 DUs	281,440	2233 DUs	13,620	2249 DUs	13,720
	Hotel	983 Rms	10,320	950 Rms	9,980	400 Rms	4,200
	TOTAL (% incr)	587.180		149,820 (+26%)		136.460 (+23%)	
TOTAL NET TRIP GENERATION (Discounting for double counting)		524,850		129,260		117,570	
PROJECTED TOTAL TRIP GENERATION (% Increase)				654,110 (+25%)		642,420 (+22%)	



XXXX = Average Daily Traffic Volume
(XX%) = Percent of Daily Capacity Utilized

Projected Average Daily Traffic Volumes
Baseline

PRC Voorhees

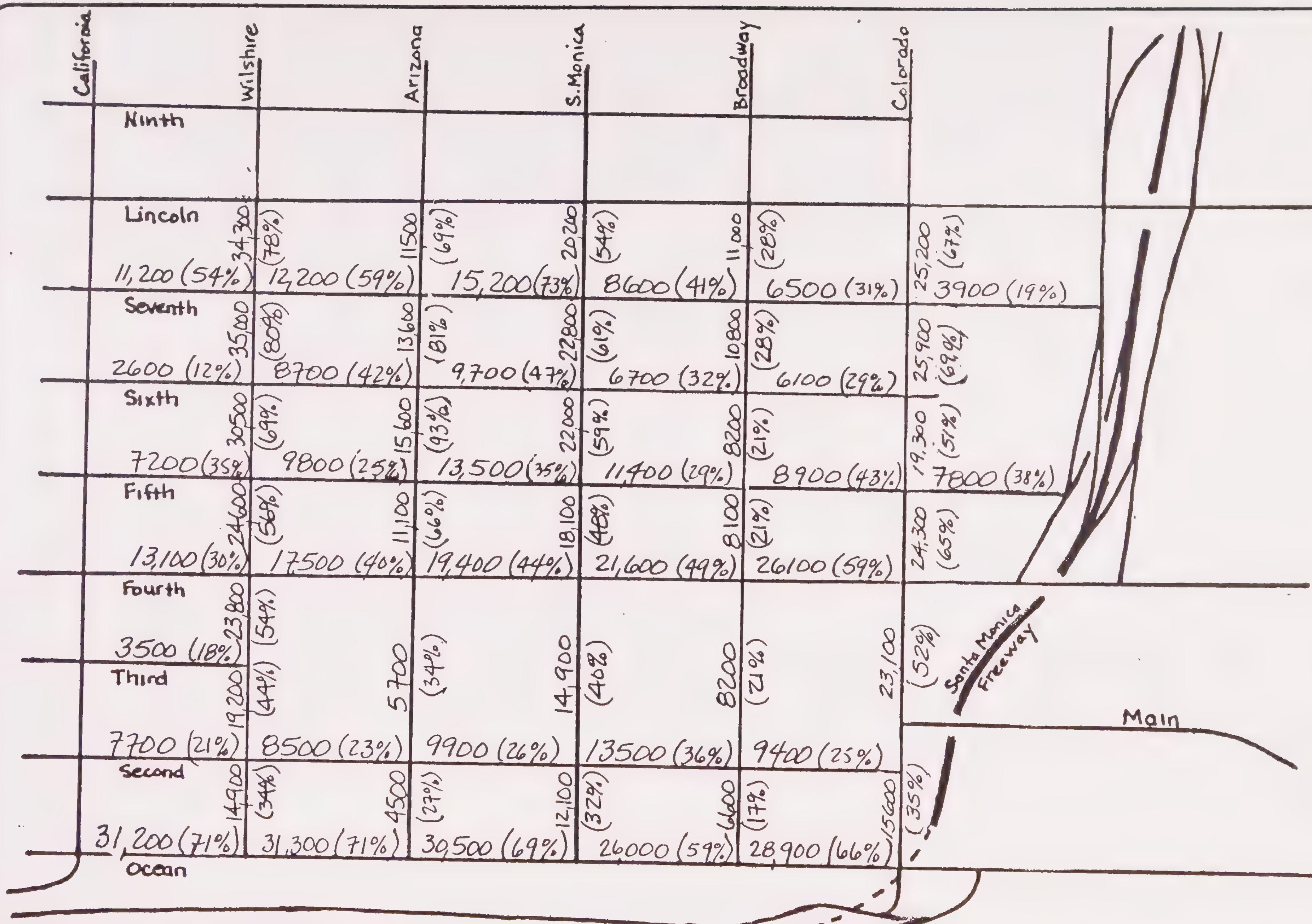


Projected Average Daily Traffic Volumes

6385

XXX = Two-Way Average Daily Traffic

(XX%) = Percentage of Daily Capacity Utilized (Note: At 75%, peak hour congestion becomes a problem)



XXXX = Average Daily Traffic Volume
(XX%) = Percentage of Daily Capacity Utilized

Projected Average Daily Traffic Volumes

6385

PRC Voorhees

Hans D. Giroux - Consultant
Meteorology - Air Quality

AIR QUALITY IMPACT ASSESSMENT

SANTA MONICA GENERAL PLAN UPDATE

Submitted to:

Hall, Goodhue, Haisley and Barker
Attn: Bryan Grunwald
100 Stevenson Street
San Francisco, CA 94105

October 10, 1983

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General Climate

The climate of Santa Monica, as with all of Southern California, is largely controlled by the semi-permanent high pressure center near Hawaii and the moderating effects of the nearby oceanic heat reservoir. Climatic conditions are characterized by cool summers, mild winters, frequent morning coastal stratus clouds, infrequent rainfall confined mainly from late fall to early spring and moderate onshore breezes. Unfortunately, the same conditions that create the desirable living climate also combine to severely restrict the ability of the local airshed to disperse the air pollutants generated by the large population attracted by the climate. Santa Monica is protected from the worst of the air pollution problems by the daily sea breeze that brings clean air onshore and blows air pollutants inland, but recirculation of polluted air and the incomplete ventilation of the basin cause some smog alerts even in coastal communities.

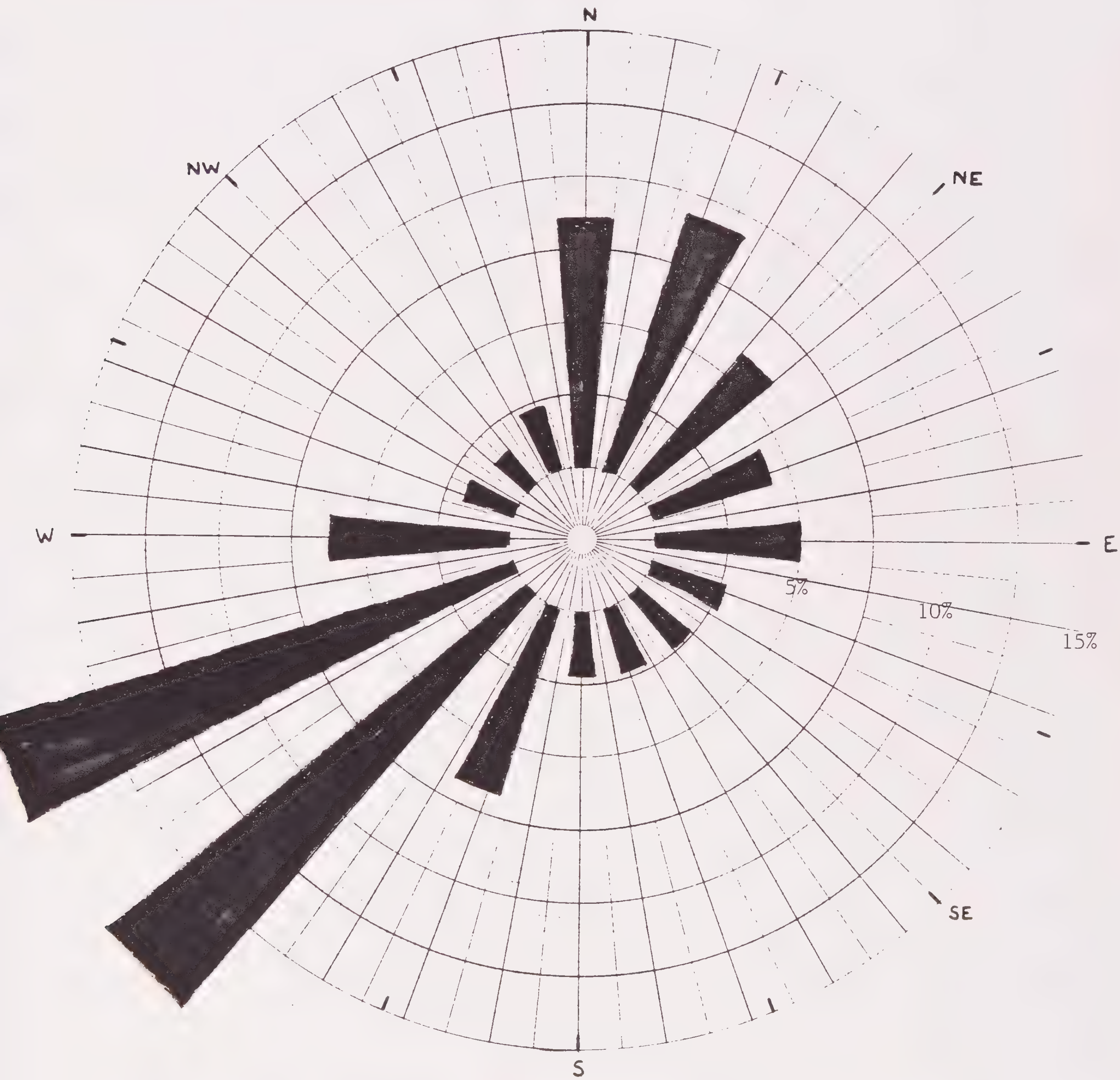
Dispersion Meteorology

Two meteorological parameters are important in assessing the air quality impacts of changing patterns of emissions in the Santa Monica area. These two elements are the winds which control the rate and trajectory of horizontal transport and vertical stability structure (inversions) which controls the vertical depth through which pollutants are mixed. Winds in Santa Monica are markedly bimodal with a strong onshore component by day which is strongest in summer and a weak offshore component which is strongest in winter when nights are long and the land becomes cooler than the ocean. Figure 1 shows the wind direction frequency distribution (wind rose) near UCLA with its strong onshore component from the SW-WSW, and the less organized nocturnal flow from the N-ENE off the Santa Monica Mountains and the mountains beyond back toward the ocean. The net effect of this wind pattern is that daytime air pollution emissions are carried inland toward downtown Los Angeles and then they diverge into the eastern San Fernando Valley and the western San Gabriel Valley. Car exhaust emitted in Santa Monica in the morning thus becomes smog in Burbank, Glendale or Pasadena by the afternoon as it moves inland and undergoes photochemical changes.

The nocturnal winds reverse the process as they recycle the previous day's pollution and carry diluted pollutants seaward. In contrast to the strong daytime flow, the weak nocturnal winds also allow for localized stagnation of pollutants near their source such as freeways or other concentrations of emissions. Without sunlight, such localized pollution "hot spots" are comprised mainly of primary, unreacted pollutants such as carbon monoxide instead of photochemical irritants such as ozone. Whereas the onshore flow makes the Santa Monica area a source of pollutants for inland receptors, the nocturnal wind change reverses the roles of the source and receptor areas.

In addition to the two characteristic wind patterns, there are two corresponding temperature inversions that trap pollution within shallow layers near the ground. The daytime onshore cool ocean air undercuts a massive dome of warm, sinking air within the Pacific high pressure system. This process creates marine/subsidence inversions that form a lid at about

LOCATION West Los Angeles (Westwood Ave.)



Source: Wind in California, 1978

Figure 1 - Santa Monica area wind direction frequency distribution.

1000 feet above the surface over the entire Los Angeles Basin. During long, cloudless nights, cold air pools near the surface while the air aloft remains warm. The radiation inversions that form are very shallow and contribute to the "hot spot" potential near ground level sources, especially vehicular concentrations. Measurements of inversion frequency at Santa Monica Airport show a strong diurnal and seasonal variation of inversion distributions. These data are presented in Table 1. Regional trapping inversions occur primarily on summer afternoons while ground-level radiation inversions are mainly a winter night and early morning phenomenon. Summer afternoons are therefore the period of poorest air quality in inland valleys while winter mornings are often times of unhealthful air quality in the basin's coastal corridor.

Table 1 - Santa Monica Upper Air Inversion Frequency

	Early Morning (0400 PST)		Late Afternoon (1600 PST)	
Inversion Type:	Summer	Winter	Summer	Winter
Surface-Based Radiation Inversions	16%	70%	0%	5%
Low-Level Trapping Inversions	42%	7%	82%	41%
High-Level or No Inversions	42%	23%	18%	54%

Source: DeMarrais, et. al., 1965

Air Quality Setting

Ambient Air Quality Standards (AAQS): In order to gauge the significance of the air quality impacts of the proposed general plan update, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

National AAQS were established in 1971 for six pollution species with states retaining the option to add other pollutants, require more stringent compliance, or to include different exposure periods. The initial attainment deadline of 1977 has since been extended to 1987 for national AAQS, and may require further extension in air quality problem areas like Southern California. Because California had established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in Californai are shown in Table 2.

Baseline Air Quality: Existing levels of ambient air quality and historical trends and projections in the Santa Monica area are well documented from measurements made by the South Coast Air Quality Management District (SCAQMD) at its West Los Angeles monitoring station. The last five years of monitoring data from this station are summarized in Table 3. These data show recurring violations of the hourly standard for ozone, and occasional violations of the standards for carbon monoxide (CO), nitrogen dioxide (NO2) and for several particulate species. The number of first stage smog alerts at 0.20 ppm of ozone for an hourly exposure has stayed constant at three per year for the last three years. While the summer ozone levels are occasionally unhealthful for all receptor populations, they are certainly much lower than in inland communities. Levels of primary automobile pollutants such as CO and NO2 exceed their standards less frequently than the summer smog, but are among the highest in the Los Angeles Basin because the winter airflow patterns drain much of the airshed directly across Santa Monica Bay.

For some pollutant species such as lead and to some extent for NO2, vehicular emission controls and stationary source emission limits have produced a noticeable improvement in air quality. For other species, the data in Table 3 suggest that there has been little change in Santa Monica air quality beyond normal year-to-year variations. This apparent stagnation is in contrast to the rather promising improvement trends experienced throughout the early and middle 1970s. The progression of the maximum hourly ozone levels in West Los Angeles (and presumably in Santa Monica) is shown in Figure 2. Ozone levels dropped rapidly from second stage alert levels in the late 1960s to slightly above first stage alert levels by the mid-1970s. Annual maxima have stayed at that same level

Table 2 – AMBIENT AIR QUALITY STANDARDS

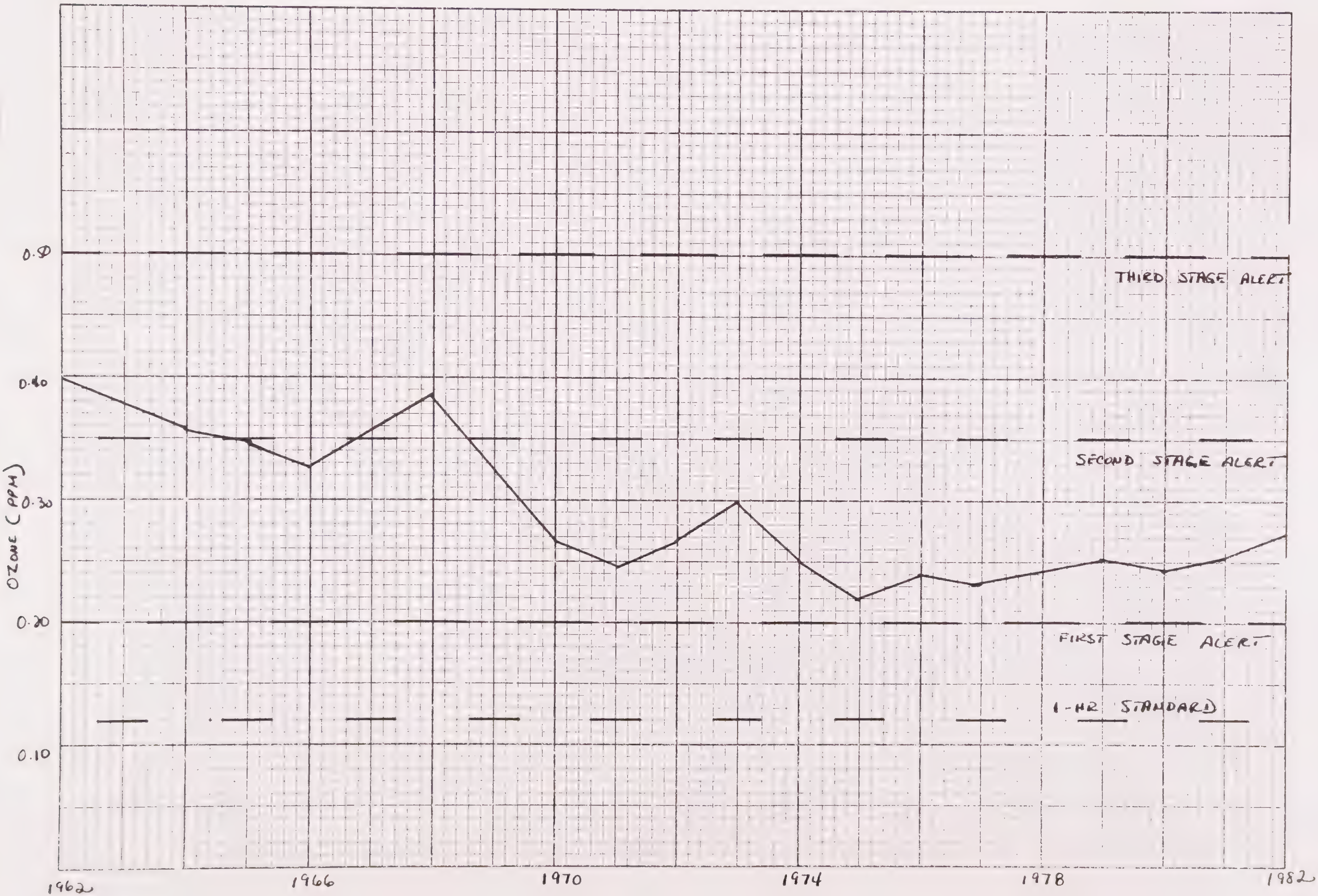
Pollutant	Averaging Time	California Standards		National Standards		
		Concentration	Method	Primary	Secondary	Method
Oxidant	1 hour	0.10 ppm (200 ug/m^3)	Ultraviolet Photometry	—	—	—
Ozone	1 hour	—	—	0.12 ppm (235 ug/m^3)	Same as Primary Standard	Ethylene Chemiluminescence
Carbon Monoxide	8 hour	9.0 ppm (10 mg/m^3)	Non-Dispersive Infrared Spectroscopy (NDIR)	10 mg/m^3 (9 ppm)	Same as Primary Standards	Non-Dispersive Infrared Spectroscopy (NDIR)
	1 hour	20 ppm (23 mg/m^3)		40 mg/m^3 (35 ppm)		
Nitrogen Dioxide	Annual Average	—	Gas Phase Chemiluminescence	100 ug/m^3 (0.05 ppm)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 hour	0.25 ppm (470 ug/m^3)		—		
Sulfur Dioxide	Annual Average	—	Ultraviolet Fluorescence	80 ug/m^3 (0.03 ppm)	—	Pararosaniline
	24 hour	0.05 ppm (131 ug/m^3)		365 ug/m^3 (0.14 ppm)	—	
	3 hour	—		—	1300 ug/m^3 (0.5 ppm)	
	1 hour	0.5 ppm (1310 ug/m^3)		—	—	
Suspended Particulate Matter	Annual Geometric Mean	60 ug/m^3	High Volume Sampling	75 ug/m^3	60 ug/m^3	High Volume Sampling
	24 hour	100 ug/m^3		260 ug/m^3	150 ug/m^3	
Sulfates	24 hour	25 ug/m^3	Turbidimetric Barium Sulfate	—	—	—
Lead	30 day Average	1.5 ug/m^3	Atomic Absorption	—	—	—
	Calendar Quarter	—	—	1.5 ug/m^3	Same as Primary Standard	Atomic Absorption
Hydrogen Sulfide	1 hour	0.03 ppm (42 ug/m^3)	Cadmium Hydroxide STRactan	—	—	—
Vinyl Chloride (Chloroethene)	24 hour	0.010 ppm (26 ug/m^3)	Tedlar Bag Collection, Gas Chromatography	—	—	—
Visibility Reducing Particles	1 observation	In sufficient amount to reduce the prevailing visibility to less than 10 miles when the relative humidity is less than 70%		—	—	—
APPLICABLE ONLY IN THE LAKE TAHOE AIR BASIN:						
Carbon Monoxide	8 hour	6 ppm (7 mg/m^3)	NDIR	—	—	—
Visibility Reducing Particles	1 observation	In sufficient amount to reduce the prevailing visibility to less than 30 miles when the relative humidity is less than 70%		—	—	—

Source: California Air Resources Board

Table 3 - Santa Monica Area Air Quality Summary (Days on which given standards were exceeded.)

Pollutant/Standard	1978	1979	1980	1981	1982
Ozone					
1-Hour ≥ 0.10 ppm	75	90	89	83	70
1-Hour > 0.12 ppm	34	33	35	40	20
1-Hour ≥ 0.20 ppm	10	7	3	3	3
1-Hour ≥ 0.35 ppm	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.24	0.26	0.21	0.23	0.28
Carbon Monoxide					
1-Hour > 20. ppm	-	-	0	0	1
8-Hour ≥ 9. ppm	21	30	37	22	20
Max. 1-Hour Conc. (ppm)	21.	24.	19.	19.	21.
Nitrogen Dioxide					
1-Hour ≥ 0.25 ppm	20	42	18	8	5
Max. 1-Hour Conc. (ppm)	0.56	0.46	0.37	0.40	0.39
Total Particulates					
24-Hour ≥ 100 ug/m^3	6/45	7/61	17/59	10/52	3/56
24-Hour > 260 ug/m^3	0/45	0/61	0/59	0/52	0/56
Max. Daily Conc. (ug/m^3)	136.	154.	191.	158.	165.
Particulate Lead					
1-Month ≥ 1.5 ug/m^3	2/10	2/12	2/12	1/12	0/12
Max. 1-Mo. Conc. (ug/m^3)	2.90	2.17	2.02	1.83	1.00
Particulate Sulfate					
24-Hour ≥ 25. ug/m^3	4/45	0/61	3/59	1/52	2/56
Max. Daily Conc. (ug/m^3)	41.2	23.5	34.9	25.3	26.0

Figure 2 - Santa Monica area annual maximum ozone concentration trendline.

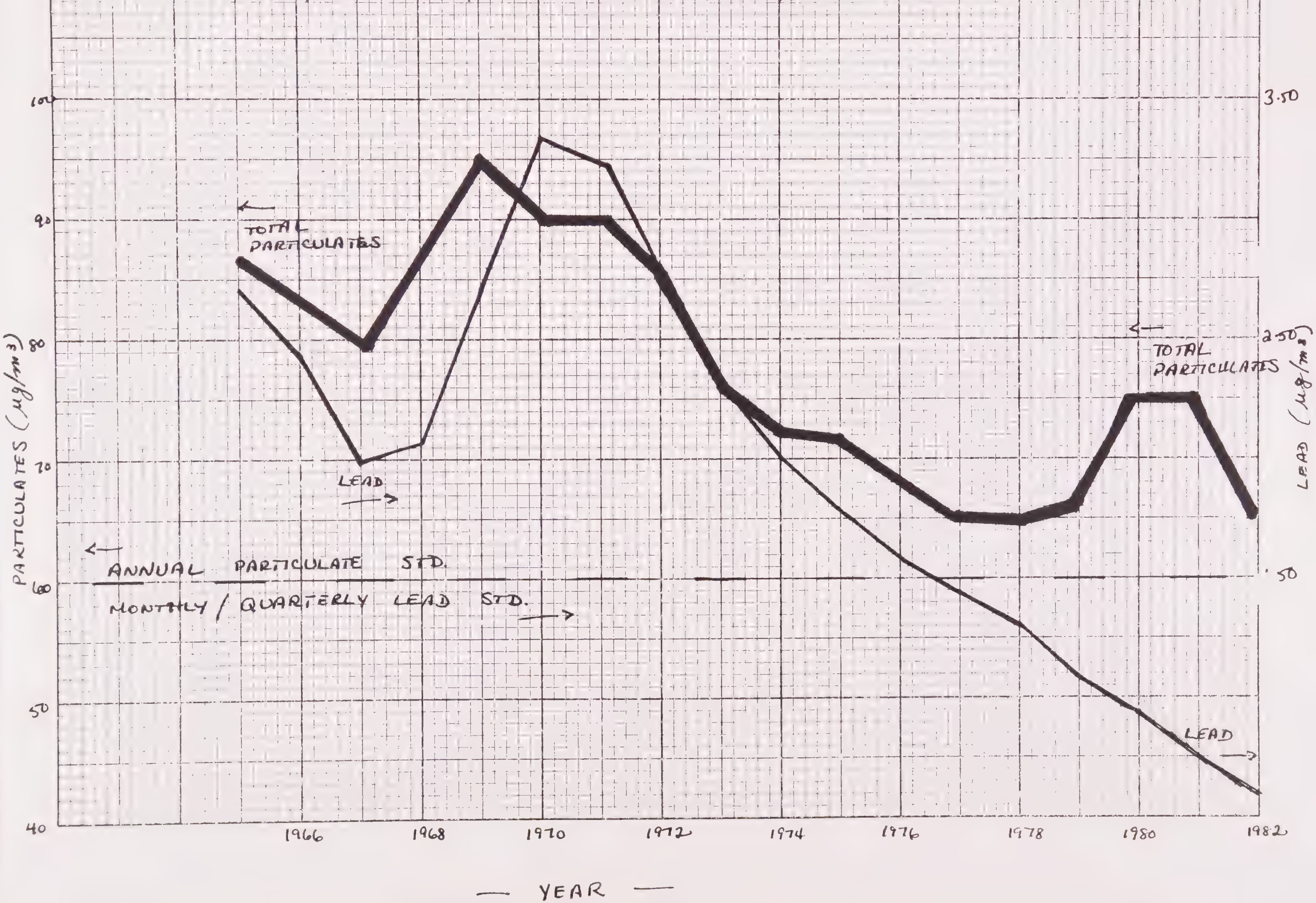


since then and have even risen slightly. The annual trend for photochemical smog in Figure 2 can be contrasted to the annual trends in particulate air quality in Figure 3. Both figures have been smoothed slightly to accommodate short term fluctuations in dispersion meteorology, but both show a definite long-term pattern in air quality that has corresponding implications for future Santa Monica air quality distributions. Extrapolation of current trends suggests that attainment of clean air standards for particulate species and probably for NO2 can be expected within this decade, CO levels will probably reach attainment status in the 1990s, and ozone levels will not reach their attainment target until perhaps beyond the year 2000.

Air Quality Management: In all areas for which federal air quality standards are violated, the Clean Air Act requires that an air quality management plan (AQMP) be prepared that outlines the tactics by which attainment will be achieved. The Act requires that all areas of the country achieve clean air by 1982 with a possible extension until 1987 if reasonable further progress is demonstrated by the interim deadline. The SCAQMD and the Southern California Association of Governments (SCAG) prepared the AQMP for the South Coast Air Basin, as part of the California State Implementation Plan, in 1978. The basic premise of this plan was that the basin could have a reasonable rate of growth and still achieve clean air if a number of assumptions were realized. Within a few years, it became obvious that many of the tactics of the AQMP were not being implemented by responsible agencies and the level of technology was not developing fast enough to even come close to attainment. The failure to implement elements of the AQMP caused the U.S. Environmental Protection Agency (EPA) to declare California to be in violation of its implementation plan, and the EPA invoked sanction authority for sewer and highway federal grants. In the AQMP update submitted by SCAG and the SCAQMD in 1982, these agencies now recognize that attainment for ozone will not be possible until the year 2000 even if all reasonable available emissions reduction measures are implemented. The cornerstone of the emissions control program is a mandatory vehicular inspection and maintenance program that will begin next year in all areas of California with continued expectations of ozone violations. This program will reduce the impact of automotive emissions on air quality, but the number of sources is so large and the dispersion meteorology is so poor that even the year 2000 may be optimistic as an attainment goal.

General Plan updates may affect the baseline assumptions of the AQMP by changing the growth assumptions that went into the AQMP. In the most recent AQMP update, the SCAG-82 growth assumptions for population, housing, employment and land use were used to predict future air pollution emission levels. These emissions estimates were then coupled with a computer model that predicts the resulting downwind air quality. Land use changes such as those in the proposed Santa Monica GPA mostly affect automotive emissions by changing the anticipated number of trips generated and the distance driven by vehicular sources. If a GPA significantly changes the volume of expected vehicular emissions, then it is potentially inconsistent with the AQMP until the plan is updated to reflect changes in growth patterns not previously considered. SCAG, in the preparation of the last series of growth forecasts, recognizes that the exact urban form of the Southern

Figure 3 - Santa Monica area particulate air quality trendline (annual avg. total particulate and particulate lead concentrations).



California area can not be predicted with certainty, and therefore prepared two sets of growth forecasts based on similar future populations, but based on either a clustered future development concept or a continuation of the distributed land uses characteristic of much of the basin's growth history. The preparation of both sets of forecasts recognizes the prerogative of local and subregional planning agencies to modify expected growth patterns that optimize use of transportation and other infrastructure systems. Even if future San Monica growth as envisioned in the proposed General Plan update has not been precisely anticipated in the current AQMP, it may very well be consistent with AQMP tactics by encouraging growth patterns that reduce vehicular emissions by virtue of a more efficient urban form. An accurate assessment of changes in ambient air quality from changing land use patterns requires sophisticated regional air pollution models, but the general sense of such potential changes can be easily established with simpler analysis methodology.

Air Quality Impact

The proposed land use plan for the City of Santa Monica anticipates a growth rate of about 60% for office use, a 30% increase in retail space, a four-fold increase in hotel rooms in the city, and small increases in industrial space and residential dwelling units within the next 20 years. That growth will be accompanied by increases in vehicular traffic to accommodate that growth. Increases in vehicular emissions will be offset to some extent by continued reductions in average automotive emissions as older cars are retired from service and as mandatory inspection and maintenance programs keep cars running more efficiently. The air quality impacts from such growth are also mitigated by the fact that the proposed urban form for the city promotes better use of transit, ride-sharing, and other transportation control measures (TCMs) that reduce the dependence on the single occupant vehicle as the primary means of transportation. Continued current patterns of growth, as anticipated in the air quality planning process, may, in fact, generate higher automotive emissions because they do not promote TCMs as well as the proposed plan.

In addition to changes in vehicular emissions, a number of secondary pollution sources are also associated with growth in the basin. Such sources include continued dust and fume generation during construction activities, increased fuel consumption in basin power plants that supply electricity to the more intensive land use, increased on-site fuel consumption for heating, cooking, hot water, and a number of very small individual sources that become important when considered cumulatively such as gas stations, dry cleaners, mowers, edgers and blowers, paints, thinners, solvents and cleaning products, etc. These sources are either temporary or they are much smaller than the vehicular contribution, and they are therefore generally not well quantified within the air quality impact assessment process.

Vehicular Source Impacts

Comparisons of vehicular source emissions as a function of various land use alternatives are made easily with an urban emissions model recently developed by the California Air Resources Board (ARB). This model, which combines land use trip generation characteristics with the California-specific vehicle emissions model EMFAC6C, calculates annual mobile source emissions from any projected land use as a function of future automotive emissions patterns. Input for this model, called URBEMIS#1, was derived from the project traffic study completed by PRC Voorhees. Table 4 summarizes the land use growth and the associated regional trip generation from the proposed plan, from the continuation of present plans, and from the "6385" Alternative. The traffic study suggests that implementation of the proposed plan will allow for a substantially higher level of growth with only a small increase in overall Santa Monica traffic. A projected increase of 85,000 daily trips from hotel, office and retail footage construction is offset by a reduction of over 40,000 trips from residential and industrial land uses. These reductions are attributed to consistency of the proposed plan with the Regional Transportation Plan. If the proposed plan is not implemented, then the traffic engineers do not foresee any change in the percentage of transit ridership or in the mean vehicle

Table 4 - Santa Monica Land Use And Traffic Growth Comparisons

Alternative	Land Use	Net Land Use Growth	Net Traffic Growth
Proposed Plan	Industrial	+7.3%	-12.0%
	Office	+59.3%	+38.7%
	Retail	+30.1%	+16.3%
	Residential	+4.8%	-14.0%
	Hotel	+289.9%	+219.9%
	NET INCREASE	-	+5.3%
Baseline	Industrial	+7.3%	+7.3%
	Office	+59.3%	+62.4%
	Retail	+30.1%	+39.2%
	Residential	+4.8%	+4.8%
	Hotel	+96.6%	+96.7%
	NET INCREASE	-	+20.1%
"6385"	Industrial	+7.3%	+7.3%
	Office	+53.1%	+55.9%
	Retail	+30.2%	+37.8%
	Residential	+4.9%	+4.9%
	Hotel	+40.7%	+40.7%
	NET INCREASE	-	+17.9%

implementation is therefore considered to be an important element in promoting effective use of various TCMs.

Results from the URBEMIS#1 modeling summarized in Table 5 show that the proposed plan indeed represents a significant air quality benefit. Continued pollution control of automobiles allows for a substantial rate of Santa Monica growth while pollution levels generated within the local area drop significantly. In particular, hydrocarbons, as precursors to photochemical smog formation, will be less than one-half of existing levels under the proposed General Plan. All three alternatives generate less air pollution on a regional scale by the year 2000, but the improvement is more dramatic under the proposed plan. The difference between "Proposed" and "Baseline" represents the air quality benefit expected from the more effective use of TCMs. Assuming transit ridership does increase as predicted and that mean vehicle occupancy increases from 1.2 passengers per car to 1.4, then air pollution will be cut from 15-20% within the Santa Monica region. The significant increase in transit and ridesharing capture rates is recognized to be an aggressive TCM goal that requires careful integration of transportation systems and land uses to be successful. Santa Monica has traditionally experienced good ridership on its transit system such that transit may well continue to meet a substantial portion of area transportation demand.

While areawide emissions reduction (and associated ambient air quality improvements) will create a regional benefit, the redistribution of traffic on already crowded roadway systems may contribute to further local air quality degradation. In conjunction with land breeze wind conditions from populated areas of the basin, the local pollution burden may cause pollution "hot spots" near the Santa Monica Freeway or within the "street canyons" along heavily developed arterials. To test for this possibility, existing and projected future traffic levels were used to initialize the California line source dispersion model CALINE3. The model was run with rush hour traffic levels and minimum dispersion conditions in order to generate a hypothetical worst-case microscale impact assessment. A screening approach was used to determine what volumes and traffic speeds are critical in causing a potential air quality problem. Carbon monoxide (CO) was used as an indicator pollutant for any potential hot spot formation. CO levels are directly proportional to the number of vehicles passing a given receptor, and they are very sensitive to vehicle speeds because emissions increase rapidly as speeds near traffic stagnation conditions. Calculations were made along Lincoln Blvd. because Lincoln carries the largest traffic volumes of all Santa Monica arterials and is an area where volumes come close to exceeding roadway capacity. Results for this analysis are shown in Table 6. Currently, it takes a traffic speed of at least 15 MPH to insure that no air quality degradation occurs under a daily volume of 50,000 vehicles. With any of the three development alternatives, future CO levels (year 2000) will decrease while volumes increase to 60-70,000 cars per day because vehicular emissions improve faster than the rate of traffic growth. Table 6 says that as long as traffic moves better than 5 MPH, there will not be a CO problem along the most heavily traveled roadway in Santa Monica unless regional CO levels are already near the standard themselves. While peak hour congestion

is expected to continue to occur along Lincoln Blvd., degradation of traffic flow towards a 5 MPH mean speed would probably prompt the implementation of additional traffic flow improvements long before the 5 MPH stagnation speed is reached. The analysis in Table 6 assumes that background levels can be represented by the average daily maximum CO level at the West Los Angeles station. These background levels are not necessarily the absolute maximum that may occur. Since it is not known if the conditions that may cause a maximum impact along one stretch of Lincoln are also the same conditions that cause high CO levels at the AQMD monitoring station (they probably are not), it was decided to use the average daily maximum as a representative background instead of hypothesizing a conjunction of local and regional maxima. This "caveat" aside, it appears certain that future CO levels will be lower than what they are now. There is not much difference in microscale CO levels among any of the three alternatives, but the proposed plan, by virtue of generating less traffic along the most heavily traveled roadway, has slightly less of a potential unhealthful impact among the three nominal impact probabilities.

Table 5 - Santa Monica Traffic Vehicular Emissions Generation (tons/year)

Pollutants Generated	Existing	Proposed	Baseline	"6385"
Carbon Monoxide	25,070	14,570	17,297	17,030
Total Hydrocarbons	4,325	1,838	2,178	2,144
Oxides of Nitrogen	2,566	1,228	1,452	1,427
Trips Generated*	587,180	625,020	737,000	723,640
VMT*	3,434,760	3,669,680	4,322,030	4,239,240

* Based on net trip generation rates for existing and proposed land uses and does not include trip reduction from one land use to another within Santa Monica (double counting).

Table 6 - Microscale Carbon Monoxide (CO) Distributions Adjacent to Santa Monica Roadways

Development Alternative	Average Vehicle Speeds					
	5	10	15	20	25	30
Existing Development	45.2*	27.4*	21.1*	18.0	16.0	14.4
Proposed Plan	25.3*	15.2	11.8	10.1	9.0	8.1
Baseline Growth	28.3*	16.8	12.9	11.0	9.7	8.7
"6385" Alternative	28.7*	17.0	13.1	11.2	9.9	8.8

Model Interpretation:
Hourly CO Concentrations in ppm, including a 6 ppm hourly background in 1982 and a 3 ppm background in 2000. Concentrations represent CO levels at 25 feet from the busiest roadway during the morning rush hour.
California one-hour standard = 20 ppm.
* = Predicted violation of the hourly standard

Model Input Parameters:
Standard California vehicle mix
Temperature = 35 degrees
Operating Mode = 21% cold start, 27% hot start, 52% hot stabilized
Stability = F, Wind = 2 MPH parallel to Lincoln Blvd.
Hourly traffic volumes = 10% of ADT

AQMP Consistency and Impact Mitigation

The proposed plan minimizes air quality impacts on both a local and regional scale. It thus mitigates air quality impacts from transportation-related growth as well as possible. This mitigation occurs by accommodating the largest rate of growth with the lowest increase in vehicular trip generation of any of the development alternatives. The project traffic study indicates that only the preferred alternative is consistent with the Regional Transportation Plan and therefore is the only alternative technically consistent with the AQMP.

AQMP consistency, and thus impact mitigation, occurs within two timeframes. The AQMP contains a number of short-range TCMs emphasizing transit, ride-sharing and roadway system improvements which will be facilitated by adoption of the proposed plan. By increasing the intensity of land use in clustered areas of the city instead of a dispersed growth pattern, transit access, paratransit systems and ride-sharing potential are maximized. More important than the short-range consistency with the AQMP, however, is that the project conforms to long-range AQMP plans. These long-range plans for the 1990's call for a revised urban form that concentrates development along accessible transportation corridors while minimizing non-residential growth away from these corridors. The proposed plan conforms to these long range plans very well and thus emphasizes that planned growth distributions can have a measurable impact on regional air pollution emissions. The trip reduction targets through transit and ridesharing are recognized as being aggressive TCM goals that can only be met by optimizing transportation and land use interactions. If these goals are realized, then the mitigation generated by development consistency with the RTP represents a 14.6% reduction in VMT generated by Santa Monica traffic with an accompanying 15% reduction in vehicular emissions of hydrocarbons, oxides of nitrogen and carbon monoxide. With no local air quality impacts from any traffic redistributions and a substantial regional emissions reduction, the proposed General Plan land use element is by far the preferable alternative from an air quality perspective.

FISCAL ANALYSIS

Prepared by:

Hamilton, Rabinovitz & Szanton, Inc.

ATTACHMENT I

COMPARISON OF CITY OF SANTA MONICA GENERAL FUND REVENUES AND EXPENDITURES: 1982 AND 2000 (BASELINE, 6385, AND ELEMENT SCENARIOS) *
(In Constant 1982 Dollars)

AREA	1982 REVENUES	1982 EXPENDITURES	1982 NET
DOWNTOWN	$10,082,800	$ 8,209,100	$ 1,873,700
INDUSTRIAL CORRIDOR	$ 2,531,600	$ 4,809,500	$(2,277,900)
MAJOR COMMERCIAL CORRIDORS			
- WILSHIRE/ SANTA MONICA	$ 6,229,100	$ 4,116,000	$ 2,113,100
- LINCOLN	937,500	1,332,700	(395,200)
- BROADWAY	376,300	450,800	(74,500)
- PICO	558,900	1,077,700	(488,800)
SUB-TOTAL	$ 8,131,800	$ 6,977,200	$ 1,154,600
NEIGHBORHOOD COMMERCIAL			
- MONTANA	$ 376,800	$ 741,500	$ (364,700)
- PICO **	57,100	-	57,100
- SUNSET PARK	387,900	632,600	(244,700)
SUB-TOTAL	$ 821,800	$ 1,374,100	$ (552,300)
OCEAN FRONT	$ 975,800	$ 641,600	$ 334,200
SUB-TOTAL (AREAS)	$22,543,800	$22,011,500	$ 532,300
OTHER AREAS OF CITY	$13,969,200	$14,481,500	(512,300)
TOTAL	$36,513,000	$36,493,000	$ 20,000

* Includes operating and capital expenditures (exclusive of possible expenditures necessary to implement the Alternative Scenario).

** Partial figures; remainder included in "Major Commercial Corridors" category.

COMPARISON OF CITY OF SANTA MONICA GENERAL FUND REVENUES AND EXPENDITURES: 1982 AND 2000 (BASELINE, 6385, AND ELEMENT SCENARIOS) *
(In Constant 1982 Dollars)

	BASELINE		
AREA	REVENUES	EXPENDITURES	NET
DOWNTOWN	$12,615,100	$10,423,300	$ 2,191,800
INDUSTRIAL CORRIDOR	$ 3,796,400	$ 6,932,900	$(3,136,500)
MAJOR COMMERCIAL CORRIDORS			
- WILSHIRE/ SANTA MONICA	$ 8,664,500	$ 5,423,300	$ 3,241,200
- LINCOLN	1,101,900	1,621,400	(519,500)
- BROADWAY	633,000	880,700	(247,700)
- PICO	657,200	1,205,800	(548,600)
SUB-TOTAL	$11,056,600	$ 9,131,200	$ 1,925,400
NEIGHBORHOOD COMMERCIAL			
- MONTANA	$ 396,700	$ 712,800	$ (316,100)
- PICO **	69,000	-	69,000
- SUNSET PARK	533,300	700,600	(167,300)
SUB-TOTAL	$ 999,000	$ 1,413,400	$ (414,400)
OCEAN FRONT	$ 1,809,400	$ 1,044,000	$ 765,400
SUB-TOTAL (AREAS)	$30,276,500	$28,944,800	$ 1,331,700
OTHER AREAS OF CITY	$14,254,600	$14,306,100	(51,500)
TOTAL	$44,531,100	$43,250,900	$ 1,280,200

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* Includes operating and capital expenditures (exclusive of possible expenditures necessary to implement the Alternative Scenario).

** Partial figures; remainder included in "Major Commercial Corridors" Category.

COMPARISON OF CITY OF SANTA MONICA GENERAL FUND REVENUES AND EXPENDITURES: 1982 AND 2000 (BASELINE, 6385, AND ALTERNATIVE SCENARIOS) *

(In Constant 1982 Dollars)

	6385		
AREA	REVENUES	EXPENDITURES	NET
DOWNTOWN	$12,449,800	$10,560,000	$ 1,889,800
INDUSTRIAL CORRIDOR	$ 3,594,500	$ 6,294,100	$(2,699,600)
MAJOR COMMERCIAL CORRIDORS			
- WILSHIRE/ SANTA MONICA	$ 8,620,300	$ 5,554,500	$ 3,065,800
- LINCOLN	1,282,400	1,963,400	(681,000)
- BROADWAY	410,800	475,500	(64,700)
- PICO	657,700	1,231,200	(573,500)
SUB-TOTAL	$10,971,200	$ 9,224,600	$ 1,746,600
NEIGHBORHOOD COMMERCIAL			
- MONTANA	$ 397,600	$ 737,300	$ (339,700)
- PICO **	69,000	-	69,000
- SUNSET PARK	534,800	718,400	(183,600)
SUB-TOTAL	$ 1,001,400	$ 1,445,700	$ (454,300)
OCEAN FRONT	$ 1,097,700	$ 878,100	$ 219,600
SUB-TOTAL (AREAS)	$29,114,600	$28,412,500	$ 702,100
OTHER AREAS OF CITY	$14,251,500	$14,369,700	(118,200)
TOTAL	$43,366,100	$42,782,200	$ 583,900

* Includes operating and capital expenditures (exclusive of possible expenditures necessary to implement the Alternative Scenario).

** Partial figures; remainder included in "Major Commercial Corridors" category.

COMPARISON OF CITY OF SANTA MONICA GENERAL FUND REVENUES AND EXPENDITURES: 1982 AND 2000 (BASELINE, 6385, AND ELEMENT SCENARIOS) *
(In Constant 1982 Dollars)

AREA	ELEMENT REVENUES	ELEMENT EXPENDITURES	ELEMENT NET
DOWNTOWN	$13,282,500	$10,589,000	$ 2,693,500
INDUSTRIAL CORRIDOR	$ 3,798,500	$ 6,765,300	$(2,966,800)
MAJOR COMMERCIAL CORRIDORS			
- WILSHIRE/ SANTA MONICA	$ 8,626,900	$ 5,307,600	$ 3,319,300
- LINCOLN	1,120,100	1,566,300	(446,200)
- BROADWAY	463,600	468,200	(4,600)
- PICO	654,700	1,180,100	(525,400)
SUB-TOTAL	$10,865,300	$ 8,522,200	$ 2,393,100
NEIGHBORHOOD COMMERCIAL			
- MONTANA	$ 396,000	$ 719,900	$ (323,900)
- PICO **	68,800	-	68,800
- SUNSET PARK	531,500	694,500	(163,000)
SUB-TOTAL	$ 996,300	$ 1,414,400	$ (418,100)
OCEAN FRONT	$ 4,457,300	$ 2,117,800	$ 2,339,500
SUB-TOTAL (AREAS)	$33,399,900	$29,408,700	$ 3,991,200
OTHER AREAS OF CITY	$14,232,900	$14,253,200	(20,300)
TOTAL	$47,632,800	$43,661,900	$ 3,970,900

* Includes operating and capital expenditures (exclusive of possible expenditures necessary to implement the Alternative Scenario).

** Partial figures; remainder included in "Major Commercial Corridors" Category.

ATTACHMENT II:
METHODOLOGY FOR CALCULATING CITY OF SANTA MONICA
GENERAL FUND REVENUES AND EXPENDITURES: 1982
AND 2000 (BASELINE, 6385 AND ELEMENT SCENARIOS)

THE ASSIGNMENT

As part of preparing a new Land Use and Circulation Element for the City of Santa Monica, City officials directed the Consultants to estimate the General Fund revenues and expenditures which could be expected under three different development scenarios: a continuation of past policies (baseline), adoption of the policy changes recommended by the City's Commercial and Industrial Task Force (City Council Resolution #6385), and an alternative policy program outlined by the consultants. Further, estimates by scenario were also to be detailed for the City as a whole and for each of five major study areas in the City: the Industrial Corridor, the Downtown, the Neighborhood Commercial Areas, the Highway Commercial Corridors, and the Oceanfront.

The purpose of this short paper is to explain how these estimates were calculated.

OVERVIEW

The estimates have been completed and totals are summarized below. All estimates are shown below in thousands of dollars.

		Year 2000		
	1982	Baseline	6385	Element
Revenues	$36,513.0	$44,531.1	$43,366.1	$47,632.8
Expenditures	36,493.0	43,250.9	42,782.2	43,661.9
Net	$ 20.0	$ 1,280.2	$ 583.9	$ 3,970.9

The estimates are based on four basic methodological constraints:

a) All projections for the year 2000 are in constant 1982 dollars. This means inflationary factors have not been included in year 2000 estimates for both the revenue and expenditure estimates. In effect, the year 2000 estimates can be viewed as projections of General Fund revenues and expenditures to be received/made by the City if all changes projected to occur under the three development scenarios were in place during FY 1982-83. Constant 1982 dollars were used in order to highlight the differential fiscal effects of the three development scenarios and to not confuse year 2000 projections with a plethora of revenue and expenditure inflationary assumptions which would be necessary if General Fund revenue and expenditure <u>forecasts</u> were prepared.

b) Only General Fund revenues and expenditures have been considered. While it is recognized that additional development in the City will affect City operations which are now financed through various Enterprise Funds, it is assumed that any additional Enterprise Fund expenditures would be directly offset by Enterprise Fund revenues generated by appropriate rate increases and/or bond issuances. Further, financial flows between the City's various Special Revenue Funds (e.g., the Gas Tax and General Revenue Sharing Funds) and the General Fund are held constant at budgeted FY 1982-83 levels.

c) These revenue and expenditure estimates do not include possible additional expenditures associated with implementation of the policy program outlined for the Element recommendations. The implementation guidelines for the Element indicate that all such improvements will be financed by benefit assessment districts, redevelopment/tax increment financing or exaction, rather than through the capital or operating budgets of the City.

d) The Business License Tax revenues are calculated at FY 1982-3 rates. The new rates to be operative in FY 1983-4 have not been used since they have not yet been reflected in ordinance form and there is currently uncertainty as to how they should be applied.

METHODOLOGICAL EXPLANATION

The following is a methodological explanation of how the City General Fund fiscal implications of the three alternative development scenarios were calculated in total, and how those results were allocated to the five study areas in the City.

GENERAL FUND REVENUES

A. Projection Methodology

All budgeted FY 1982-83 City General Fund revenue accounts were categorized as listed below. The categorization scheme was selected on the basis of grouping like revenue accounts — i.e., as development occurred in the City, accounts which could reasonably be expected to increase in relationship to a common factor or factors associated with that expected development were grouped. Categories are listed in order of the magnitude of their contribution to the City's FY 1982-83 General Fund revenue budget. Attachment II details the revenue estimates by category and by study area. Also listed below are the major procedural assumptions incorporated into the calculation procedures; minor procedural assumptions are footnoted at the attached detailed calculation worksheets. Various estimates and detailed calculation factors used in the calculation processes were taken from:

-- Hall Goodhue Haisley and Barker, "Background to the Issue Papers", February 1983.
-- PRC Voorhees, "Santa Monica General Plan Circulation Analysis", February 25, 1983.
-- Hamilton, Rabinovitz and Szanton, "City of Santa Monica Demographic and Economic Projections: 1980-2000", February 1983.

	Revenue Category	FY 1982-83 General Fund Budget Amount	Common Factors: Relationship Between	Common Factors: Major Assumptions
1.	Sales Tax	$10,308,000	a) Number of square feet of retail development and sales tax permits (by study area) as determined from a stratified sample of all City sales tax permits for the second quarter of CY 1982.	a) Amount of future annual sales tax revenues per permit will be the same as 1982 sales tax revenues per permit as determined by stratified sample.

Revenue Category	FY 1982-83 General Fund Budget Amount	Common Factors: Relationship Between	Common Factors: Major Assumptions
		b) Amount of 1982 sales tax revenues received by the City per sales tax permit (by study area). c) Number of additional retail sq. ft., by study area, expected 1982-2000.	b) Future average amount of sq. ft. per permit, by study area, will be same as current average.
2. Property Related Taxes (Consists of Property Taxes and Real Property Transfer Revenues)	$ 5,873,600	a) Total property taxes expected to be received by the City during FY 1982-83 and total assessed value (land and improvements) by study area. b) 1982 assessed improvement value per sq. ft. of improvement, by type of space use (i.e., office, retail, manufacturing, and other) by study area. c) Projected number of additional sq. ft. of improvements between 1982-2000 by type of space use by study area. d) Percentage of land value decreases expected under provisions of City Council Resolution #6385 in various study areas based on case study pro-formas.	a) Future sq. ft. of improvement should be valued at current average assessed value per sq. ft., by type of space use. b) Results of case study pro-formas are generalizable to land in the appropriate study areas.

	Revenue Category	FY 1982-83 General Fund Budget Amount	Common Factors: Relationship Between	Common Factors: Major Assumptions
3.	Utility Related Taxes (Consists of Utility User's Tax and Franchise Tax)	$ 4,774,200	--Utility User's Tax a) Number of existing sq. ft. of development (office, retail, industrial, and residential) and budgeted FY 1982-83 Utility User's Tax revenues to derive an amount of Utility User's Tax to be received per sq. ft. of development. b) Projected number of sq. ft. of additional development. --Franchise Tax c) Once projected Utility User's Tax revenues (by development scenario) were calculated, budgeted FY 1982-83 Franchise Tax revenues were increased in the same proportions.	a) Future amount of Utility User's Tax per sq. ft. of development will be same as current average revenue per sq. ft. b) Method used to project Utility User's Tax is also appropriate for projecting future Franchise Tax revenues.
4.	Parking Related Revenues (Consists of: On-Street Meter, Municipal Ordinance Violation and Out-of-State Parking Citation revenues)	$ 4,297,200	a) Distribution of current parking meters throughout City (in study areas and rest of City). b) Judgement (per interview with City staff) as to how much current revenues from parking meters, by study area, could reason-	a) On a study area scale, all parking meters generate about the same amount of parking meter revenue during a year. b) The amount of parking meter revenue from a fixed number of meters is proportional to the intensity of traffic where the meters are located.

	Revenue Category	FY 1982-83 General Fund Budget Amount	Common Factors	
			Relationship Between	Major Assumptions
4.	Parking Related Revenues (Cont'd.)		ably increase, if traffic volume increased. Projected study area traffic increases estimated by PRC Voorhees.	c) The incidence of parking tickets is directly proportional to the number of parking meters and the intensity of traffic. d) In 2000, there will be the same number of parking meters in the City as in 1982.
			Relationship Between	Major Assumptions
5.	Business/Professional/Occupational License Revenue	$ 1,650,000	a) Budgeted amount of FY 1982-83 Bus./Prof./Occ. License revenue per average sq. ft. of office, retail and industrial space currently in the City. b) Projected number of additional sq. ft. of office, retail and industrial space, 1982-2000.	a) New development mix by major use, in the year 2000 will be the same as is the current development mix, by mix use. b) Current relationship of revenue/sq. ft. will be the same as in the year 2000.
			Relationship Between	Major Assumptions
6.	Transient Occupancy Tax	$ 1,455,000	--New Hotel Rooms a) Estimates of current revenues per first class hotel room from existing hotels in the City. b) Projected number of new hotel rooms to be built by the year 2000. --Existing Hotel Rooms a) Determined from current City records.	--New Hotel Rooms a) Current average revenue per first class hotel room is reasonable estimate of revenues to be derived from new hotel rooms. b) All new hotel rooms will be first class room. --Existing Hotel Rooms a) Same number of existing hotel rooms would exist, by same type of hotel, in the year 2000.

Revenue Category	FY 1982-83 General Fund Budget Amount	Common Factors: Relationship Between	Common Factors: Major Assumptions
7. City Daytime-Related Revenues (Consists of all other Licenses/Permits, Cigarette Tax, Various Police Fees, Other Charges, and False Burglar Alarm Fees)	$ 993,200	a) Calculation of current daytime population and daytime population under three scenarios which is arithmetic sum of the following: -- City Resident Pop. -- Less # of Residents in Labor Force Who Work Outside of City — Plus Est. of # of Visitors/Shoppers b) Number and percentage change in number of daytime population.	a) Number of Visitors/shoppers are 50% of sum of workers in the City + resident non-labor force population. b) Amount of these revenues varies by amount of daytime population in the City.
8. Development Related Revenues (Consists of Building Permits, Plan Checking Fees, Barricade Permits, Plan Check Inspection Fees, and various other Planning Fees)	$ 835,300	a) Estimated amount of annual revenue (exclusive of any special revenues due to development agreements) per sq. ft. of development, by type of development. Based on FY 1980-81 actual revenues and actual sq. ft. of development, by type, inflated by 10%/yr. to FY 1982-83:	a) Estimated current revenue per sq. ft. of development, by type of development, will not change by the year 2000. b) One eighteenth of the total additional sq. ft. of development projected from 1982-2000 will occur each year.

Type of Devel.	Annual Rev./sq. ft.
Residential	$ .41
Industrial	$ .23
Retail	$ .76
Office	$1.19

Revenue Category	FY 1982-83 General Fund Budget Amount	Common Factors: Relationship Between	Common Factors: Major Assumptions
8. Development Related Revenues (Cont'd.)	$ 835,300	b) Projected number of additional sq. ft. of office, retail, industrial, residential, and hotel development by the year 2000.	
9. Rental Revenues	$ 422,900	a) Simply reflects budgeted FY 1982-83 rental income.	a) Assumes number of and revenue from FY 1982-83 rental agreements will not change by the year 2000.
10. Vehicle Code Fines	$ 350,000	a) Increased traffic projected under each of the three development scenarios as a percentage of current estimated traffic volume. b) Current traffic volume and budgeted FY 1982-83 revenues.	a) The amount of vehicle code revenue received by the City is proportional to the number and flow of traffic in the City--given current levels of traffic code enforcement and current fine structure.
11. Downtown Specific Revenues (Consists of: Parking Structure Permits, Parking/Business Improv. District, Gen. Prom. Bus. License, SM Place-Sub-Lease and SM Place Developer Payments)	$ 1,730,400	--	a) The amount of these revenues will either not change or will not vary significantly by year 2000--assuming constant 1982 dollars and current rates/fee structure.

	Revenue Category	FY 1982-83 General Fund Budget Amount	Common Factors: Relationship Between	Common Factors: Major Assumptions
12.	Revenues Not From Study Areas (Consists of: Condominium Tax, Filming Permits, Interest, Indirect Costs, Peace Officer Training, Election Costs, Other Agency Revenues, Contract Services Program, Street Resurfacing Assessments, Resurfacing Utility Cuts, Library Fines/Fees, Various Recreation Fees, Sidewalk Repair, SM-Place Redevelopment Agency Payment (Agency to City), Trust and Agency Fund Revenues, and Other)	$ 3,823,200	—	a) These revenues are not paid into the General Fund from any of the study areas. b) Amount of these revenues will not change by year 2000.

B. Study Area Allocation Methodology

Budgeted FY 1982-83 and projected year 2000 revenues, by development scenario, were next allocated to the five study areas and/or to the remainder of the City (i.e., portions of the City outside the boundaries of the five study areas) as indicated below.

Revenue Category	Basis For Allocation
1. Sales Tax	-- Area specific estimates of current amount of sales tax revenue per sales tax collection permit; "Remainder of City" is residual category.
2. Property Related Taxes	-- Based on special print out of 1982 Assessor's Tape produced area specific estimates of current amount of property tax revenue per sq. ft. of development and area specific estimates of current amount of property tax revenue from land. Real Property Transfer Tax revenue allocated to study areas in same manner as property

B. Study Area Allocation Methodology

Revenue Category	Basis For Allocation
2. Property Related Taxes (Cont'd.)	tax revenues were allocated.
3. Utility Related Taxes	-- Area specific projections of amount of additional development, 1982-2000, by type of development. See calculation worksheets at
4. Parking Related Revenues	-- Current distribution of City parking meters.
5. Business/Professional/Occupational License Revenues	-- Area specific projections of amount of additional development, 1982-2000, by type of development.
6. Transient Occupancy Tax	-- Following assumptions concerning location of new (1982-2000) first class hotel rooms:

Area	Baseline	6385	Element
Industrial Corridor	406	406	406
Oceanfront	550	-	2,450

Current (total) hotel rooms were allocated on basis of actual location.

7. City Day-time Related Revenues	-- Allocation reflects area specific estimates of the following: a) Number of workers in the City. b) Resident Non-working City Pop. (Assumed to all be in the category of "Remainder of City") c) Sum of [a) + b) x .5] to produce estimate of number of visitors and/or shoppers.
8. Development Related Revenues	-- Area specific projections of amount of additional development, 1982-2000, by type of development.
9. Rental Revenues	-- Actual location of rental.

B. Study Area Allocation Methodology

Revenue Category	Basis For Allocation
10. Vehicle Code Fines	-- Actual and projected distribution of daily traffic volume in the City.
11. Downtown Specific Revenues	-- All allocated to the Downtown Study Area.
12. Specific Revenues Not From Study Areas	-- All allocated to "Other Areas of City" allocation category.

GENERAL FUND EXPENDITURES

A. Projection Methodology-General Statement

All budgeted FY 1982-83 City General Fund expenditures were categorized as listed below. The categorization scheme was selected on the basis of major departmental groupings.

Also listed below are the major assumptions incorporated into all category calculations. minor

B. Projection Methodology-Major Assumptions Incorporated Into All Category Calculations

Calculation Item	Methods/Assumptions
1. Dept. Sub-Total	-- Includes: Salaries and Wages, Supplies and Expenses, and Capital Outlay (Equipment)
2. Non-Departmental (Transfers)	
-- Gas Tax Funds	-- These are St./Fed. gasoline tax revenues received by the City, deposited into the Gas Tax Fund and subsequently transferred to the General Fund to offset General Fund (Streets) expenditures. It is assumed that the same amount of Gas Tax revenues will be similarly transferred in the year 2000.
-- General Revenue Sharing	-- These are Federal revenues received by the City, deposited into the Revenue Sharing Fund and, subsequently, a large portion is transferred to the General Fund to offset General Fund (parks and recreation) expenditures. It is assumed that the same amount of Revenue Sharing Fund revenues will be similarly transferred in the year 2000.

B. Projection Methodology-Major Assumptions Incorporated Into All Category Calculations

Calculation Item	Methods/Assumptions
3. Non-Departmental (Program)	
— Retirement	-- Budgeted employee retirement percentages (safety-32.161% and non-safety-12.636%) applied to total budgeted salaries and wages.
-- Health and Dental	-- Budgeted contribution per position of $1,617 times number of full time equivalent positions.
-- Workers' Compensation	— Budgeted contribution per position of $1,214 times number of full time equivalent positions.
— Pay Raises	-- Total budgeted General Fund salary increases divided by total budgeted salaries (w/o salary increase) times budgeted salaries and wages (w/o salary increases) for each dept./division. Assumes that for the categories of depts./diversions considered in this analysis, mix of positions is such that use of average salary increase factor is reasonable.
-- Payment to Redevelopment	— Required annual payment from General Fund to the Redevelopment Fund for the Downtown Redevelopment Project; remains same to 2000.
— Payment to Parking Authority	— Required annual payment from General Fund to Parking Authority Fund; remains same to 2000.
— Payment to Convention and Visitors Bureau	— Allocation of 2% of Transient Occupancy Tax revenues to the Convention and Visitors Bureau; remains same to 2000.
-- Administrative Indirect	— Payment by Enterprise Funds and Special Revenue Funds to the General Fund for various management and administrative support services provided to them by General Fund departments; remains same to 2000. This is a negative number.

B. Projection Methodology-Major Assumptions Incorporated Into All Category Calculations

Calculation Item	Methods/Assumptions
-- Interfund Transfers	-- Various miscellaneous transfers between Enterprise/Special Revenue Funds and the General Fund; remains same to 2000; see detail in FY 1982-83 budget. This is a negative number.
-- Miscellaneous Appropriations	-- Miscellaneous minor appropriations from the General Fund; remains the same to 2000; see detail in FY 1982-83 budget.
4. Capital Projects	-- Budgeted FY 1982-83 captial projects appropriations. Assumes that one time appropriation of $.4 million for computer up-date will in future years, be used for: a) unusual service delivery equipment needs generated by projected development; and b) any capital construction/additional space needs for additional City staff generated by projected development.

C. STUDY AREA ALLOCATION METHODOLOGY

The basis for allocating the expenditure projections among the five study areas and the "Remainder of City" residual category is set forth below.

Expenditure Category	Basis for Allocation
1. Community and Economic Development	
a) Planning and Zoning	-- Allocated to study areas in same manner as "Development Related Revenues" were allocated to the study areas.
b) Building Regulation	-- Allocated to study areas in same manner as "Development Related Revenues" were allocated to the study area.
c) Housing	-- Allocated to "Other Areas of City" category.
d) Program and Policy Development and Administration	-- Proportionate share of total expenditures budgeted for these functions which are applicable to 1 a), 1 b) and 1 c) were allocated to 1 a), 1 b) and 1 c) in proportion to the relationship between their individual totals and their combined sums, by study area.

C. STUDY AREA ALLOCATION METHODOLOGY

Expenditure Category	Basis for Allocation
2. Police	-- Allocated to study areas in same manner as "City Daytime-Related Revenues" were allocated to the study areas.
3. Fire	-- Allocated to study areas in same manner as "City Daytime-Related Revenues" were allocated to the study areas.
4. Parks and Recreation	
a) Parks Maintenance	-- Allocated in same manner as "City Daytime-Related Revenues" were allocated to the study areas, except estimate of number of visitors/shoppers was not included in this calculation.
b) Tree Maintenance	-- Allocated in same manner as "City Daytime-Related Revenues" were allocated to the study areas, except estimate of number of visitors/shoppers was not included in this calculation.
c) Recreation	-- Allocated to "Remainder of City" category.
d) Harbor	-- Allocated to "Remainder of City" category.
e) Administration	-- Proportionate share of total expenditures budgeted for this function which are applicable to 4a) - 4d) were allocated to 4 a) - 4 d) in proportion to the relationship between their individual totals and their combined sums, by study area.
5. Library	-- Allocated to "Remainder of City" category.
6. General Services	
a) Engineering	-- Allocated to study areas in same manner as "Development Related Revenues" were allocated to the study areas.

C. STUDY AREA ALLOCATION METHODOLOGY

Expenditure Category	Basis for Allocation
6. General Services	
b) Traffic	-- Allocated to study areas in same manner as "Vehicle Code Fines Revenues" (which were based on estimates of traffic volumes projected for each development scenario) were allocated to the study areas.
c) Streets	-- Allocated to study areas in same manner as "Vehicle Code Fines Revenues" (which were based on estimates of traffic volumes projected for each development scenario) were allocated to the study areas.
d) Administration	-- Proportionate share of total expenditures budgeted for this function which are applicable to 6 a) - 6 c) were allocated to 6 a) - 6 c) in proportion to the relationship between their individual totals and their combined sums, by study area.
7. General Government and Support	-- "Payment to Redevelopment" was allocated to the Downtown study area. "Payment to Convention and Visitors Bureau" was allocated 50% to the Downtown and 50% to the Oceanfront study areas. All other budgeted appropriations were allocated in proportion to the individual totals and combined sums, by study area, of 1 a) - 6 d) above.